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=> file caplus wpids uspatfull

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=> s dried(w)agglomerated(2w)cyclodextrin
L1            0 DRIED(W) AGGLOMERATED(2W) CYCLODEXTRIN

=> s dried(l)agglomerated(l)cyclodextrin
L2           75 DRIED(L) AGGLOMERATED(L) CYCLODEXTRIN

=> l2 and (particle size)
L3           68 L2 AND (PARTICLE SIZE)

=> dup rem l3
PROCESSING COMPLETED FOR L3
L4           68 DUP REM L3 (0 DUPLICATES REMOVED)

=> d l3 1-68 ibib ab

L3   ANSWER 1 OF 68  CAPLUS  COPYRIGHT 2002 ACS
ACCESSION NUMBER:         1995:835638  CAPLUS
DOCUMENT NUMBER:          123:222303
TITLE:                    Gas-containing microparticles for sonography
INVENTOR(S):              Heldmann, Dieter; Weitschies, Werner; Fritzsch,
                          Thomas; Speck, Ulrich; Hauff, Peter
PATENT ASSIGNEE(S):       Schering A.-G., Germany
SOURCE:                   Ger. Offen., 8 pp.
                          CODEN: GWXXBX
DOCUMENT TYPE:            Patent
LANGUAGE:                 German
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE           APPLICATION NO.   DATE
     ---------------   ----  --------       ---------------   --------
     DE 4406474         A1   19950824       DE 1994-4406474   19940223
     CA 2183968         AA   19950831       CA 1995-2183968   19950210
     WO 9522994         A1   19950831       WO 1995-EP484     19950210
         W:  AU, BY, CA, CN, CZ, FI, HU, JP, KR, MX, NO, NZ, PL, RU, SK, UA,
US
         RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
     AU 9518087         A1   19950911       AU 1995-18087     19950210
     AU 701797          B2   19990204
     EP 744961          A1   19961204       EP 1995-909702    19950210
     EP 744961          B1   20010919
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT,
SE
     HU 74516           A2   19970128       HU 1996-2300      19950210
     CN 1141595         A    19970129       CN 1995-191752    19950210
     JP 09509186        T2   19970916       JP 1995-522099    19950210
     EP 855186          A2   19980729       EP 1998-250140    19950210
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EP 855186 A3 19990127
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE
RU 2137502 C1 19990920 RU 1996-119318 19950210
CZ 287115 B6 20000913 CZ 1996-2421 19950210
AT 205727 E 20011015 AT 1995-909702 19950210
ES 2162912 T3 20020116 ES 1995-909702 19950210
IL 112617 A1 19991222 IL 1995-112617 19950212
ZA 9501498 A 19951207 ZA 1995-1498 19950223
FI 9603279 A 19960822 FI 1996-3279 19960822
NO 9603501 A 19961022 NO 1996-3501 19960822
PRIORITY APPLN. INFO.: DE 1994-4406474 A 19940223
EP 1995-909702 A3 19950210
WO 1995-EP484 W 19950210

AB Microparticles for use in diagnostic sonog. are prepd. from a surfactant, a non-surface-active component, and a gas which is less sol. in water than is air. The surfactant may be e.g. a phospholipid, sterol, glycolipid, PEG fatty acid ester, etc. The non-surface-active component may be e.g. a **cyclodextrin**, mono-, di-, or trisaccharide, pentose, polyol, or org. or inorg. salt. The gas is or includes a halogenated (esp. fluorinated) hydrocarbon. The microparticles are suspended in a physiol. compatible aq. medium. These particles provide intense and long-lasting contrast and can be used in very low doses in media which are essentially isotonic with blood. Thus, a soln. of galactose 1997 in water 1080 g at 5.degree. was mixed with a soln. of lignoceric acid 3 in EtOH 120 g and the mixt. was **dried**, pulverized to **particle size** <8 .mu.m, and the resulting microparticles were **agglomerated** and exposed in evacuated vials to SF6.

L3 ANSWER 2 OF 68 USPATFULL
ACCESSION NUMBER: 2002:144296 USPATFULL
TITLE: Compounds and method for use thereof in the treatment of cancer or viral infections
INVENTOR(S): Quada, Jr., James C., San Antonio, TX, United States
Agyin, Joseph K., San Antonio, TX, United States
Camden, James Berger, West Chester, OH, United States
PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6407131	B1	20020618
APPLICATION INFO.:	US 2000-676030		20000929 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1997-857811, filed on 16 May 1997
DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Jones, Dwayne C.
ASSISTANT EXAMINER: Delacroix-Muirheid, C.
LEGAL REPRESENTATIVE: Hersko, Bart S.
NUMBER OF CLAIMS: 20
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)
LINE COUNT: 1558

AB Benzimidazole derivatives and salts and prodrugs thereof are disclosed, together with methods for the treatment of cancers or viral infections in warm blooded animals by administration of these compounds. Such compounds may be used in combination with a chemotherapeutic agent

and/or a potentiator.

L3 ANSWER 3 OF 68 USPATFULL
ACCESSION NUMBER: 2002:144274 USPATFULL
TITLE: Compounds and methods for use thereof in the treatment of cancer or viral infections
INVENTOR(S): Quada, Jr., James C., San Antonio, TX, United States
Agyin, Joseph K., San Antonio, TX, United States
Camden, James Berger, West Chester, OH, United States
PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6407105	B1	20020618	
APPLICATION INFO.:	US 2000-670169		20000926	(9)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Stockton, Laura L.
LEGAL REPRESENTATIVE: Hersko, Bart S.
NUMBER OF CLAIMS: 17
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)
LINE COUNT: 1591
AB Benzimidazole derivatives and salts and prodrugs thereof are disclosed, together with methods for the treatment of cancers or viral infections in warm blooded animals by administration of these compounds. Such compounds may be used in combination with a chemotherapeutic agent and/or a potentiator.

L3 ANSWER 4 OF 68 USPATFULL
ACCESSION NUMBER: 2002:133235 USPATFULL
TITLE: Pharmaceutical superdisintegrant
INVENTOR(S): Staniforth, John, Bath, UNITED KINGDOM

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2002068084	A1	20020606	
APPLICATION INFO.:	US 2000-731238	A1	20001206	(9)

	NUMBER	DATE	
PRIORITY INFORMATION:	US 1999-169174P	19991206	(60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: DAVIDSON, DAVIDSON & KAPPEL, LLC, 485 Seventh Avenue, 14th Floor, New York, NY, 10018
NUMBER OF CLAIMS: 101
EXEMPLARY CLAIM: 1
LINE COUNT: 1264
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Superdisintegrants which provide improved compressibility compared to prior art superdisintegrants and which does not negatively impact the compressibility of formulations which include high-dose drugs, and methods for obtaining the same are disclosed. The superdisintegrants include a particulate agglomerate of coprocessed starch or cellulose and
a sufficient amount of an augmenting agent to increase the compactibility of the superdisintegrant. The augmented superdisintegrant

provides a fast disintegration of a solid dosage form when incorporated in sufficient quantity therein, without untowardly affecting the compactibility of the solid dosage form (relative to the solid dosage form without the superdisintegrant).

L3 ANSWER 5 OF 68 USPATFULL
ACCESSION NUMBER: 2002:126142 USPATFULL
TITLE: Adhesive compositions containing graft copolymers
INVENTOR(S): Lau, Willie, Ambler, PA, UNITED STATES
Rheenen, Paul Ralph Van, Warminster, PA, UNITED STATES

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2002064652	A1	20020530	
APPLICATION INFO.:	US 2001-951924	A1	20010913	(9)

	NUMBER	DATE	
PRIORITY INFORMATION:	US 2000-232414P	20000914	(60)
	US 2000-253171P	20001127	(60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Rohm and Haas Company, Wendy A. Choi, 100 Independence Mall West, Philadelphia, PA, 19106
NUMBER OF CLAIMS: 10
EXEMPLARY CLAIM: 1
LINE COUNT: 1882
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides adhesive compositions, particularly pressure sensitive adhesive compositions, comprised of from 30 weight percent to 70 weight percent of water insoluble graft copolymers dispersed in an aqueous medium. The graft copolymers are comprised of (i) from 1 weight percent to 30 weight percent of macromonomer, based on the total weight of the copolymer, wherein the macromonomer is water insoluble and has a number average molecular weight of from 2,000 to 50,000 g/mole and comprises from 85 to 100 weight percent polymerized units of at least one first ethylenically unsaturated monomer, 5 mole percent or less of polymerized mercapto-olefin compounds, and 10 weight percent or less polymerized acid-containing monomer; and (ii) from 70 weight percent to 99 weight percent of polymerized units of at least one second ethylenically unsaturated monomer, based on the total weight of the copolymer. In certain preferred embodiments, the adhesive compositions further comprise from 0.1 to 60 weight percent solids of at least one additive. The additive is selected from the group consisting of emulsifiers, defoamers, tackifiers, pigments, humectants, fillers, curing agents, thickeners, wetting agents, biocides, adhesion promoters, colorants, waxes, UV stabilizers, and antioxidants.

L3 ANSWER 6 OF 68 USPATFULL
ACCESSION NUMBER: 2002:122606 USPATFULL
TITLE: Fatty acids, soaps, surfactant systems, and consumer products based on branched 17-carbon fatty acids
INVENTOR(S): Connor, Daniel Stedman, The Procter & Gamble Company, Miami Valley Laboratories P.O. Box 538707, Cincinnati, OH, United States 45253-8707
Scheibel, Jeffrey John, The Procter & Gamble Company,

Miami Valley Laboratories P.O. Box 538707, Cincinnati, OH, United States 45253-8707
Back, Deborah Jean, The Procter & Gamble Company, Sharon Woods Technical Center 11510 Reed Hartman Hwy., Cincinnati, OH, United States 45241
Trinh, Toan, The Procter & Gamble Company, Sharon Woods Technical Center 11510 Reed Hartman Hwy., Cincinnati, OH, United States 45241
Vinson, Phillip Kyle, The Procter & Gamble Company, Miami Valley Laboratories P.O. Box 538707, Cincinnati, OH, United States 45253-8707
Severson, Roland George, The Procter & Gamble Company, Miami Laboratories P.O. Box 538707, Cincinnati, OH, United States 45253-8707
Cripe, Thomas Anthony, The Procter & Gamble Company, Miami Valley Laboratories P.O. 538707, Cincinnati, OH, United States 45253-8707
Burckett-St. Laurent, James Charles Theophile Roger, The Procter & Gamble Company, Miami Valley Laboratories P.O. Box 538707, Cincinnati, OH, United States 45253-8707
Sivik, Mark Robert, The Procter & Gamble Company, Miami Valley Laboratories P.O. Box 538707, Cincinnati, OH, United States 45253-8707
Wahl, Errol Hoffman, The Procter & Gamble Company, Sharon Woods Technical Center 11510 Reed Hartman Hwy., Cincinnati, OH, United States 45241
Frankenbach, Gayle Marie, The Procter & Gamble Company, Sharon Woods Technical Center 11510 Reed Hartman Hwy., Cincinnati, OH, United States 45241
Declercq, Marc Johan, Procter & Gamble Services Company, Temselaan 100, B-1853, Strombeek-Bever, BELGIUM
Demeyere, Hugo Jean Marie, Procter & Gamble Services Company, Temselaan 100, B-1853, Strombeek-Bever, BELGIUM

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6395701	B1	20020528
APPLICATION INFO.:	US 2000-507823		20000222 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-63603P	19971023 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Hardee, John
LEGAL REPRESENTATIVE: Cook, C. Brant, Zerby, Kim W., Miller, Steve W.
NUMBER OF CLAIMS: 13
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)
LINE COUNT: 5457
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Novel fatty acids and derivatives thereof such as salts, new surfactant systems comprising one or more of these compounds, consumer products

such as laundry products, personal care products, pharmaceutical compositions, industrial cleaners, and the like comprising said compounds or surfactant systems.

L3 ANSWER 7 OF 68 USPATFULL
ACCESSION NUMBER: 2002:116245 USPATFULL
TITLE: Detergent tablet
INVENTOR(S): Speed, Lynda Anne, Newcastle upon Tyne, UNITED KINGDOM
Painter, Jeffrey Donald, Loveland, OH, United States
Foley, Peter Robert, Cincinnati, OH, United States
Scheper, William Michael, Lawrenceburg, IN, United States
Sivik, Mark Robert, Mitchell, KY, United States
PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6391845	B1	20020521	
	WO 9927064		19990603	
APPLICATION INFO.:	US 2000-555083		20000524	(9)
	WO 1998-US23612		19981105	
			20000524	PCT 371 date

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-66621P	19971126 (60)
	US 1998-72439P	19980126 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Douyon, Lorna M.
LEGAL REPRESENTATIVE: Robinson, Ian, Waugh, Kevin L.
NUMBER OF CLAIMS: 11
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)
LINE COUNT: 3133
AB A detergent tablet comprising a non-compressed, gelatinous portion, wherein the gelatinous portion comprising a thickening system and at least one detergent active. The thickening system preferably includes a non-aqueous diluent and a gelling agent and the detergent active is preferably selected from the group consisting of enzymes, surfactants, effervescing agents, bleaching agents, silver care agents, builders, and
mixtures thereof. The non-compressed, gelatinous portion, may contain one, two or a plurality of non-compressed, gelatinous portions, all of which comprise a thickening system and at least one detergent active.

L3 ANSWER 8 OF 68 USPATFULL
ACCESSION NUMBER: 2002:95823 USPATFULL
TITLE: Benzimidazole urea derivatives, and pharmaceutical compositions and unit dosages thereof
INVENTOR(S): Quada, Jr., James C., San Antonio, TX, United States
Agyin, Joseph K., San Antonio, TX, United States
Camden, James Berger, West Chester, OH, United States
PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6380232	B1	20020430

APPLICATION INFO.: US 2000-670170 20000926 (9)
DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Stockton, Laura L.
LEGAL REPRESENTATIVE: Hersko, Bart S.
NUMBER OF CLAIMS: 25
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)
LINE COUNT: 1596
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Benzimidazole derivatives and salts and prodrugs thereof are disclosed, together with methods for the treatment of cancers or viral infections in warm blooded animals by administration of these compounds. Such compounds may be used in combination with a chemotherapeutic agent and/or a potentiator.

L3 ANSWER 9 OF 68 USPATFULL
ACCESSION NUMBER: 2002:60652 USPATFULL
TITLE: Leave-in hair cosmetic compositions for enhancing volume
INVENTOR(S): Midha, Sanjeev, Mason, OH, UNITED STATES
Thomson, Shari Renee, Cincinnati, OH, UNITED STATES
Snyder, Michael Albert, Kobe, JAPAN

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002034486	A1	20020321
APPLICATION INFO.:	US 2001-822704	A1	20010330 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. WO 2000-US8760, filed on 31 Mar 2000, UNKNOWN

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-231152P	20000908 (60)
	US 2001-261384P	20010112 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: DINSMORE & SHOHL, LLP, 1900 CHEMED CENTER, 255 EAST FIFTH STREET, CINCINNATI, OH, 45202
NUMBER OF CLAIMS: 34
EXEMPLARY CLAIM: 1
LINE COUNT: 2693
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Leave-in hair cosmetic compositions for enhancing hair volume comprise non-spherical microparticles exhibiting a mean **particle size** of less than about 100 .mu.m in its longest dimension, a water-soluble or water-swellable polymer, and an aqueous carrier such that the combination of the polymer and the microparticles results in a film-forming network. Also disclosed are methods for enhancing hair volume, and more particularly for enhancing hair volume with leave-in aqueous cosmetic compositions which contain non-spherical microparticles of less than 100 .mu.m in its longest dimension, a water-soluble or water-swellable polymer and an aqueous carrier. The disclosed compositions provide improved hair volume, body, bounce, fullness, springiness, and texture in addition to providing good hair conditioning and styling benefits. Fluid-encapsulated, flexible microspheres which exhibit a mean **particle size** of less than about 300 .mu.m in diameter may also be included in the compositions.

L3 ANSWER 10 OF 68 USPATFULL
ACCESSION NUMBER: 2002:21810 USPATFULL
TITLE: Leave-in hair cosmetic compositions for enhancing volume containing fluid-encapsulated, flexible microspheres
INVENTOR(S): Midha, Sanjeev, Mason, OH, UNITED STATES
Thomson, Shari Renee, Cincinnati, OH, UNITED STATES
Stella, Qing, Cincinnati, OH, UNITED STATES
Snyder, Michael Albert, Higashinada, JAPAN

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002012645	A1	20020131
APPLICATION INFO.:	US 2001-821942	A1	20010330 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. WO 2000-US8760, filed on 31 Mar 2000, UNKNOWN

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-231154P	20000908 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: DINSMORE & SHOHL, LLP, 1900 CHEMED CENTER, 255 EAST FIFTH STREET, CINCINNATI, OH, 45202
NUMBER OF CLAIMS: 23
EXEMPLARY CLAIM: 1
LINE COUNT: 2496
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Leave-in hair cosmetic compositions for enhancing hair volume comprise fluid-encapsulated, flexible microspheres exhibiting a mean **particle size** of less than about 300 .mu.m in diameter, a water-soluble or water-swellable polymer, and an aqueous carrier such that the combination of the polymer and the microspheres results in a solid continuous or semi-continuous film network. Methods for enhancing hair volume, and more particularly for enhancing hair volume, comprise applying leave-in aqueous cosmetic compositions which contain spherical, flexible, fluid-encapsulated particles of less than about 300 .mu.m in diameter, a water-soluble or water-swellable polymer and an aqueous carrier. The compositions provide improved hair volume, body, bounce, fullness, springiness, and texture in addition to providing good hair conditioning and styling benefits.

L3 ANSWER 11 OF 68 USPATFULL
ACCESSION NUMBER: 2002:14013 USPATFULL
TITLE: Viral treatment
INVENTOR(S): Camden, James Berger, West Chester, OH, United States
PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6340696	B1	20020122
APPLICATION INFO.:	US 2000-663578		20000915 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 2000-535173, filed on 27 Mar 2000, now patented, Pat. No. US 6245788
Continuation-in-part of Ser. No. US 1999-281895, filed on 31 Mar 1999, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED

PRIMARY EXAMINER: Spivack, Phyllis G.
LEGAL REPRESENTATIVE: Dabek, Rose Ann, Miller, Steven W.
NUMBER OF CLAIMS: 24
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)
LINE COUNT: 964
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A pharmaceutical composition that inhibits or slows the growth of viruses in animals, particularly in mammals, while reducing cytoxicity of ribavirin or interferon is disclosed. This same composition can be used to treat viral infections, particularly hepatitis C. The composition preferably comprises from about 10 mg to about 6000 mg of a (5-aryl-1,2,4-thiadiazol)-3-yl thiourea derivative or (5-aryl-1,2,4-thiadiazol)-3-yl urea derivative of the formula:
##STR1##

wherein X is oxygen or sulfur, R is hydrogen or alkyl having from 1-3 carbons, n is 0-4, R.sub.1 is independently selected from the group consisting of hydrogen, alkyl having from 1 to 7 carbon atoms, chloro, bromo or fluoro, oxychloro, alkoxy having the formula --O(CH.sub.2).sub.yCH.sub.3, wherein y is from 1 to 6, or a pharmaceutically acceptable acid addition salt or prodrug thereof and a safe and effective amount of ribavirin, interferon or mixtures thereof. The preferred compound is (5-phenyl-1,2,4-thiadazol-3-yl) thiourea.

L3 ANSWER 12 OF 68 USPATFULL
ACCESSION NUMBER: 2001:217988 USPATFULL
TITLE: Stabilized preparations for use in metered dose inhalers
INVENTOR(S): Weers, Jeffry G., San Diego, CA, United States
Schutt, Ernest G., San Diego, CA, United States
Dellamary, Luis A., San Marcos, CA, United States
Tarara, Thomas E., San Diego, CA, United States
Kabalnov, Alexey, Corvallis, OR, United States

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2001046474	A1	20011129
APPLICATION INFO.:	US 2001-862764	A1	20010521 (9)

RELATED APPLN. INFO.: Division of Ser. No. US 1998-218212, filed on 22 Dec 1998, PENDING Continuation of Ser. No. WO 1998-US20615, filed on 29 Sep 1998, UNKNOWN Continuation-in-part of Ser. No. US 1998-133848, filed on 14 Aug 1998, ABANDONED Continuation-in-part of Ser. No. US 1998-106932, filed on 29 Jun 1998, ABANDONED

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-60337P	19970929 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: INHALE THERAPEUTIC SYSTEMS, INC, 150 INDUSTRIAL ROAD, SAN CARLOS, CA, 94070
NUMBER OF CLAIMS: 150
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 4 Drawing Page(s)
LINE COUNT: 2850
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Stabilized dispersions are provided for the delivery of a bioactive

agent to the respiratory tract of a patient. The dispersions preferably comprise a plurality of perforated microstructures dispersed in a suspension medium that typically comprises a hydrofluoroalkane propellant. As density variations between the suspended particles and suspension medium are minimized and attractive forces between microstructures are attenuated, the disclosed dispersions are particularly resistant to degradation, such as, by settling or flocculation. In particularly preferred embodiments, the stabilized dispersions may be administered to the lung of a patient using a metered dose inhaler.

L3 ANSWER 13 OF 68 USPATFULL

ACCESSION NUMBER:	2001:214703 USPATFULL			
TITLE:	Low density fructan composition and method for preparing same			
INVENTOR(S):	De Soete, Johan, Bierbeek, Belgium Booten, Karl, Geetbets, Belgium Daenekindt, Luc, Gijzegem-Aalst, Belgium			
PATENT ASSIGNEE(S):	Tiense Suikerraffinaderij N.V., Belgium (non-U.S. corporation)			
	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6322835	B1	20011127	
	WO 9838223		19980903	
APPLICATION INFO.:	US 1999-380220		19991012	(9)
	WO 1998-BE15		19980130	
			19991012	PCT 371 date
			19991012	PCT 102(e) date
	NUMBER		DATE	
PRIORITY INFORMATION:	EP 1997-870029		19970227	
DOCUMENT TYPE:	Utility			
FILE SEGMENT:	GRANTED			
PRIMARY EXAMINER:	Pratt, Helen			
LEGAL REPRESENTATIVE:	Hayes, Soloway, Hennessey, Grossman & Hage P.C.			
NUMBER OF CLAIMS:	4			
EXEMPLARY CLAIM:	1			
LINE COUNT:	281			

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A low density fructan having a loose density equal or less than 0.35 g/ml to a composition which comprises intimately associated with the fructan one or more of maltodextrins, polydextrose, sucrose, polyols and high intensity sweeteners. Also provided is a method for preparing the fructan and the composition, and a composition which presents instant dispersion properties in aqueous medium.

L3 ANSWER 14 OF 68 USPATFULL

ACCESSION NUMBER:	2001:200184 USPATFULL			
TITLE:	Compositions and methods of treatment for cancer or viral infections			
INVENTOR(S):	Camden, James Berger, West Chester, OH, United States			
PATENT ASSIGNEE(S):	The Procter & Gamble Company (U.S. corporation)			
	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2001039291	A1	20011108	

APPLICATION INFO.: US 2001-851513 A1 20010508 (9)
RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1999-469389, filed on 22 Dec 1999, GRANTED, Pat. No. US 6228876 Continuation of Ser. No. US 1998-138058, filed on 21 Aug 1998, GRANTED, Pat. No. US 6025377 Division of Ser.
No. US 1997-792741, filed on 3 Feb 1997, GRANTED, Pat. No. US 5872142 Division of Ser. No. US 1995-473819, filed on 7 Jun 1995, GRANTED, Pat. No. US 5770616
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: THE PROCTER & GAMBLE COMPANY, PATENT DIVISION, IVORYDALE TECHNICAL CENTER - BOX 474, 5299 SPRING GROVE
AVENUE, CINCINNATI, OH, 45217
NUMBER OF CLAIMS: 20
EXEMPLARY CLAIM: 1
LINE COUNT: 876
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A pharmaceutical composition that inhibits the growth of tumors and cancers in mammals that comprises a 1H-1,2,4-triazole derivative. The compounds can also be used to treat viral infections.

L3 ANSWER 15 OF 68 USPATFULL
ACCESSION NUMBER: 2001:199763 USPATFULL
TITLE: Pharmaceutical with predetermined activity profile
INVENTOR(S): Jaenicke, Christof, Berlin, Germany, Federal Republic of
Grunwald, Jorg, Berlin, Germany, Federal Republic of
Hanggi, Benedikt, Arlesheim, Switzerland

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2001038863	A1	20011108
APPLICATION INFO.:	US 2001-790582	A1	20010223 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	CH 2000-2000347	20000223

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Bruce J. Boggs, Jr., BURNS, DOANE, SWECKER & MATHIS, L.L.P., P.O. Box 1404, Alexandria, VA, 22313-1404
NUMBER OF CLAIMS: 27
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 5 Drawing Page(s)
LINE COUNT: 1343
AB A first pharmacologically active substance contained in a pharmaceutical, which acts on a specific biological function, is released according to a predetermined release profile (D.1), FIG. 1, and
generates a first activity profile (1.1) that has flank phases with increasing and decreasing activity intensity. For changing such flank phases, an additional pharmacologically active substance is used which acts on the same biological function and which is released according to a release profile (D.2) such that its activity profile (I.2) overlays the first activity profile (I.1) within the flank phase to be changed. For shortening an end flank phase, an additional substance is used whose
activity is counter to the activity of the first substance and cancels,

reduces, or overpowers this activity in its declining phase. Accordingly, with the aforementioned pharmaceutical, undesirable aftereffects of a pharmacologically active substance, for example, can be prevented. In one embodiment, a sedative is contained as a first pharmacologically active substance, which is released immediately, and a stimulant, which is released with delay and thus counteracts uncomfortable aftereffects of the sedative in its end phase, is contained as an additional pharmacologically active substance.

L3 ANSWER 16 OF 68 USPATFULL

ACCESSION NUMBER:	2001:190709 USPATFULL
TITLE:	Stabilized preparations for use in metered dose inhalers
INVENTOR(S):	Weers, Jeffry G., San Diego, CA, United States Schutt, Ernest G., San Diego, CA, United States Dellamary, Luis A., San Marcos, CA, United States Tarara, Thomas E., San Diego, CA, United States Kabalnov, Alexey, Corvallis, OR, United States
PATENT ASSIGNEE(S):	Inhale Therapeutic Systems, Inc., San Carlos, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6309623	B1	20011030
APPLICATION INFO.:	US 1998-218212		19981222 (9)
RELATED APPLN. INFO.:	Continuation of Ser. No. WO 1998-US20615, filed on 29 Sep 1998 Continuation-in-part of Ser. No. US 1998-133848, filed on 14 Aug 1998, now abandoned Continuation-in-part of Ser. No. US 1998-106932, filed on 29 Jun 1998, now abandoned		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-60337P	19970929 (60)

DOCUMENT TYPE:	Utility
FILE SEGMENT:	GRANTED
PRIMARY EXAMINER:	Bawa, Raj
LEGAL REPRESENTATIVE:	Rafa, Michael J., Cagan, Felissa H.
NUMBER OF CLAIMS:	93
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	17 Drawing Figure(s); 4 Drawing Page(s)
LINE COUNT:	2644

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Stabilized dispersions are provided for the delivery of a bioactive agent to the respiratory tract of a patient. The dispersions preferably comprise a plurality of perforated microstructures dispersed in a suspension medium that typically comprises a hydrofluoroalkane propellant. As density variations between the suspended particles and suspension medium are minimized and attractive forces between microstructures are attenuated, the disclosed dispersions are particularly resistant to degradation, such as, by settling or flocculation. In particularly preferred embodiments, the stabilized dispersions may be administered to the lung of a patient using a metered dose inhaler.

L3 ANSWER 17 OF 68 USPATFULL

ACCESSION NUMBER:	2001:188724 USPATFULL
TITLE:	Viral treatment

INVENTOR(S): Camden, James Berger, West Chester, OH, United States
PATENT ASSIGNEE(S): The Protector & Gamble Company (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2001034358	A1	20011025
	US 6384064	B2	20020507
APPLICATION INFO.:	US 2001-871565	A1	20010530 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2000-535173, filed on 27 Mar 2000, GRANTED, Pat. No. US 6245788
Continuation-in-part of Ser. No. US 1999-281895, filed on 31 Mar 1999, ABANDONED
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Rose Ann Dabek, The Procter & Gamble Company, Ivorydale
Technical Center, 5299 Spring Grove Avenue, Cincinnati,
OH, 45217
NUMBER OF CLAIMS: 12
EXEMPLARY CLAIM: 1
LINE COUNT: 816
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A pharmaceutical composition that inhibits or slows the infection or reinfection of animals, particularly mammals, by HIV or other retroviruses is disclosed. The composition comprises from about 10 mg to about 6000 mg of a (5-aryl-1,2,4-thiadiazol)-3-yl thiourea derivative or (5-aryl-1,2,4-thiadiazol)-3-yl urea derivative of the formula: ##STR1##

wherein X is oxygen or sulfur, R is hydrogen or alkyl having from 1-3 carbons, n is 1-4, R.sub.1 is independently selected from the group consisting of hydrogen, alkyl having from 1 to 7 carbon atoms, chloro, bromo or fluoro, oxychloro, alkoxy having the formula --O(CH.sub.2).sub.yCH.sub.3 wherein y is from 1 to 6, or a pharmaceutically acceptable acid addition salt or prodrug thereof. The preferred compound is (5-phenyl-1,2,4-thiadazol-3-yl) thiourea

L3 ANSWER 18 OF 68 USPATFULL
ACCESSION NUMBER: 2001:182613 USPATFULL
TITLE: Viral treatment
INVENTOR(S): Camden, James Berger, West Chester, OH, United States
PATENT ASSIGNEE(S): The Procter & Gamble Company (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2001031773	A1	20011018
	US 6410575	B2	20020625
APPLICATION INFO.:	US 2001-812094	A1	20010319 (9)

RELATED APPLN. INFO.: Division of Ser. No. US 2000-535172, filed on 27 Mar 2000, GRANTED, Pat. No. US 6258831
Continuation-in-part of Ser. No. US 1999-281896, filed on 31 Mar 1999, ABANDONED
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Rose Ann Dabek, The Procter & Gamble Company, Ivorydale

Technical Center, 5299 Spring Grove Avenue, Cincinnati,
OH, 45217
NUMBER OF CLAIMS: 32
EXEMPLARY CLAIM: 1
LINE COUNT: 1299
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A pharmaceutical composition that inhibits or slows the growth of viruses in animals, particularly in mammals, is disclosed. This same composition is can be used to treat viral infections, particularly hepatitis C, herpes simplex, Kaposi's sarcoma and HIV. The composition preferably comprises from about 10 mg to about 6000 mg of a (5-aryl-1,2,4-thiadiazol)-3-yl thiourea derivative or (5-aryl-1,2,4-thiadiazol)-3-yl urea derivative of the formula: ##STR1##

wherein X is oxygen or sulfur, R is hydrogen or alkyl having from 1-3 carbons, n is 0-4, R.sub.1 is independently selected from the group consisting of hydrogen, alkyl having from 1 to 7 carbon atoms, chloro, bromo or fluoro, oxychloro, alkoxy having the formula --O(CH.sub.2).sub.yCH.sub.3 wherein y is from 1 to 6, or a pharmaceutically acceptable acid addition salt or prodrug thereof. The preferred compound is (5-phenyl-1,2,4-thiadazol-3-yl) thiourea.

L3 ANSWER 19 OF 68 USPATFULL
ACCESSION NUMBER: 2001:152468 USPATFULL
TITLE: Animal care system and litter with reduced malodor impression
INVENTOR(S): Trinh, Toan, Maineville, OH, United States
Tordil, Helen Bernardo, West Chester, OH, United States
Chung, Alex Haejoon, West Chester, OH, United States
Harvey, George Joseph, Fairfield, OH, United States
Liu, Zaiyou, West Chester, OH, United States
Mowry, Leslie A., Wyoming, OH, United States
PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6287550	B1	20010911	
	WO 9827261		19980625	
APPLICATION INFO.:	US 1999-331247		19990709	(9)
	WO 1997-US23702		19971217	
			19990709	PCT 371 date
			19990709	PCT 102(e) date

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Page, Thurman K.
ASSISTANT EXAMINER: Tran, S.
LEGAL REPRESENTATIVE: Camp, Jason J., Turner, Frank C.
NUMBER OF CLAIMS: 85
EXEMPLARY CLAIM: 1
LINE COUNT: 3408
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Animal care systems desirably include animal litter with reduced malodor
impression comprising solid moisture-absorbing material and effective amounts of both odor absorbing material, preferably, cyclodextrin, or derivative thereof, and material for reducing the formation of malodor,

e.g., antibacterial and/or urease inhibitor, preferably water-soluble metallic salt such as zinc salt. Behavior control products are also provided including animal repellent and attractant products, preferably in spray containers, and freshening and cleaning products, also especially in spray containers, and, preferably, in association with instructions for using the products to carry out a method of animal control in which the animal litter is refreshed as needed, and areas are treated with repellent and attractant products to influence the animals to avoid certain areas and frequent other areas, and products for cleaning areas where accidents occur and discouraging the animal from returning to those areas.

L3 ANSWER 20 OF 68 USPATFULL

ACCESSION NUMBER:	2001:147500 USPATFULL
TITLE:	Method of spray freeze drying proteins for pharmaceutical administration
INVENTOR(S):	Maa, Yuh-Fun, Millbrae, CA, United States Nguyen, Phuong-Anh, San Mateo, CA, United States
PATENT ASSIGNEE(S):	Genentech, Inc., South San Francisco, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6284282	B1	20010904	
APPLICATION INFO.:	US 1999-299377		19990427	(9)

	NUMBER	DATE	
PRIORITY INFORMATION:	US 1998-145738P	19980429	(60)

DOCUMENT TYPE:	Utility
FILE SEGMENT:	GRANTED
PRIMARY EXAMINER:	Dudash, Diana
ASSISTANT EXAMINER:	Sharareh, Shahnam
LEGAL REPRESENTATIVE:	Svoboda, Craig G.
NUMBER OF CLAIMS:	15
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	29 Drawing Figure(s); 10 Drawing Page(s)
LINE COUNT:	1726

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to the spray freeze dry preparation of dry powder formulations of therapeutic proteins suitable for administration via pulmonary delivery.

L3 ANSWER 21 OF 68 USPATFULL

ACCESSION NUMBER:	2001:139207 USPATFULL
TITLE:	Ink jet recording material
INVENTOR(S):	Kitamura, Ryu, Chiba-shi, Japan Takahashi, Tomomi, Tokyo, Japan Endo, Eriko, Urawa-shi, Japan Ohshima, Kazuaki, Yokohama-shi, Japan Mukoyoshi, Shunichiro, Urayasu-shi, Japan Tsuchida, Tetsuo, Takarazuka-shi, Japan
PATENT ASSIGNEE(S):	OJI PAPER CO., LTD., Tokyo, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE

PATENT INFORMATION: US 2001016249 A1 20010823
APPLICATION INFO.: US 2001-769318 A1 20010126 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 2000-19758	20000128
	JP 2000-86939	20000327
	JP 2000-280504	20000914
	JP 2000-280557	20000914

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: ARMSTRONG,WESTERMAN, HATTORI,, MCLELAND & NAUGHTON, LLP, 1725 K STREET, NW, SUITE 1000, WASHINGTON, DC, 20006
NUMBER OF CLAIMS: 43
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 2 Drawing Page(s)
LINE COUNT: 3970
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB An ink jet recording material having excellent smoothness and gloss and capable of recording thereon ink images having high color density clarity, water resistance and sharpness comparative to the silver salt photographic images has a recording stratum formed on a substrate and comprising a single ink receiving layer or a plurality of ink receiving layers superposed on each other and containing a pigment and a binder, at least one ink receiving layer containing fine particles of at least one pigment selected from silica, aluminosilicate, and .alpha.-, .theta.-, .delta.- and .gamma.-aluminas and having an average **particle size** of 1 .mu.m or less and optionally a light resistance-enhancing agent for images including at least one of phenolic compounds, boric acid, borate salts and cyclodextrin compounds.

L3 ANSWER 22 OF 68 USPATFULL
ACCESSION NUMBER: 2001:136295 USPATFULL
TITLE: Support for high performance affinity chromatography and other uses
INVENTOR(S): Abbott, Nicholas, Madison, WI, United States
Stroeve, Pieter, Davis, CA, United States
Dubrovsky, Timothy B., Flemington, NJ, United States
Hou, Zhizhong, Davis, CA, United States
PATENT ASSIGNEE(S): The Regents of the University of California, Oakland, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6277489	B1	20010821
APPLICATION INFO.:	US 1998-205750		19981204 (9)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Le, Hoa T.
LEGAL REPRESENTATIVE: Townsend and Townsend and Crew LLP
NUMBER OF CLAIMS: 44
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 2 Drawing Figure(s); 2 Drawing Page(s)
LINE COUNT: 3868
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Multilayered particulate materials are formed by coating a particulate substrate with a metal and adsorbing an organic layer comprising a recognition moiety onto the metal film. The recognition moiety interacts

with an analyte of interest allowing for its detection, purification, etc. Suitable recognition moieties can be selected from a range of species including, small molecules, polymers and biomolecules and the like. The novel particulate materials of the invention can be utilized in an array of methods including, ion-exchange, ion-selective ion-exchange, assays, affinity dialysis, size exclusion dialysis, as supports in solid phase synthesis, combinatorial synthesis and screening of compound libraries and the like.

L3 ANSWER 23 OF 68 USPATFULL

ACCESSION NUMBER:	2001:125598 USPATFULL		
TITLE:	Preparation of dough and baked products		
INVENTOR(S):	Nielsen, Jack Beck, Hellerup, Denmark Schafer, Thomas, Farum, Denmark		
PATENT ASSIGNEE(S):	Novozymes A/S, Bagsuaerd, Denmark (non-U.S. corporation)		
	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6270813	B1	20010807
APPLICATION INFO.:	US 2000-536539		20000328 (9)
	NUMBER		DATE
PRIORITY INFORMATION:	DK 1999-432		19990330
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	GRANTED		
PRIMARY EXAMINER:	Bhat, Nina		
LEGAL REPRESENTATIVE:	Lambiris, Esq., Elias J., Gargell, Esq., Jason I.		
NUMBER OF CLAIMS:	18		
EXEMPLARY CLAIM:	1		
LINE COUNT:	498		

AB A process for preparing a dough or a baked product comprises adding an amylase to the dough in an amount which is effective to retard the staling of the bread. The amylase is an exo-amylase which hydrolyzes starch to form mainly mal-totriose.

L3 ANSWER 24 OF 68 USPATFULL

ACCESSION NUMBER:	2001:107913 USPATFULL		
TITLE:	Viral treatment		
INVENTOR(S):	Camden, James Berger, West Chester, OH, United States		
PATENT ASSIGNEE(S):	The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)		
	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6258831	B1	20010710
APPLICATION INFO.:	US 2000-535172		20000327 (9)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1999-281896, filed on 31 Mar 1999, now abandoned		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	GRANTED		
PRIMARY EXAMINER:	Spivack, Phyllis G.		
LEGAL REPRESENTATIVE:	Dabek, Rose Ann, Miller, Steven W.		
NUMBER OF CLAIMS:	32		
EXEMPLARY CLAIM:	1		
LINE COUNT:	1259		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Methods are disclosed to treat viral infections, particularly hepatitis

C, herpes simplex, Kaposi's sarcoma and HIV, comprising administrating a
(5-aryl-1,2,4-thiadiazol)-3-yl thiourea derivative or
(5-aryl-1,2,4-thiadiazol)-3-yl urea derivative of the formula: ##STR1##

wherein X is oxygen or sulfur, R is hydrogen or alkyl having from 1-3 carbons, n is 0-4, R.sub.1 is independently selected from the group consisting of hydrogen, alkyl having from 1 to 7 carbon atoms, chloro, bromo or fluoro, oxychloro, alkoxy having the formula --O(CH.sub.2).sub.y CH.sub.3 wherein y is from 1 to 6, or a pharmaceutically acceptable acid addition salt or prodrug thereof. The preferred compound is (5-phenyl-1,2,4-thiadazol-3-yl) thiourea.

L3 ANSWER 25 OF 68 USPATFULL
ACCESSION NUMBER: 2001:93106 USPATFULL
TITLE: Starchy cleaning and cosmetic care preparations
INVENTOR(S): Muller, Wilfried, Ubach-Palenberg, Germany, Federal Republic of
Vathie, Rainer, Stolberg, Germany, Federal Republic of
Cardinali, Martin Scott, Martinsville, NJ, United States
PATENT ASSIGNEE(S): National Starch and Chemical Investment Holding Corporation, Wilmington, DE, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6248338	B1	20010619	
	WO 9801109		19980115	
APPLICATION INFO.:	US 1999-214571		19990107	(9)
	WO 1997-EP3581		19970707	
			19990107	PCT 371 date
			19990107	PCT 102(e) date

	NUMBER	DATE
PRIORITY INFORMATION:	DE 1996-19627498	19960708

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Dodson, Shelley A.
ASSISTANT EXAMINER: Lamm, Marina
LEGAL REPRESENTATIVE: Kaiser, Karen G.
NUMBER OF CLAIMS: 28
EXEMPLARY CLAIM: 1
LINE COUNT: 1372
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A composition for cleaning or caring for the skin, teeth or hair or for cleaning smooth surfaces in described, which has an aqueous phase containing a pregelatinized, crosslinked starch selected from a C.sub.2 -C.sub.5 hydroxyalkyl starch and a C.sub.2 -C.sub.18 acyl starch. Preference is given to hydroxypropyl di-starch phosphate or di-starch C.sub.4 -C.sub.18 -alkanoate or alkenoate. The starch acts 1) as a stability improver, 2) as a viscosity regulator, 3) as a (co)emulsifier,
4) as a skin feel improving agent and 5) as an agent for improving hairdressing characteristics.

L3 ANSWER 26 OF 68 USPATFULL
ACCESSION NUMBER: 2001:90259 USPATFULL
TITLE: N-chlorophenylcarbamate and N-chlorophenylthiocarbamate

compositions
INVENTOR(S): Camden, James Berger, West Chester, OH, United States
PATENT ASSIGNEE(S): The Procter & Gamble Company (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2001002403	A1	20010531
APPLICATION INFO.:	US 2000-748652	A1	20001222 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1999-408664, filed on 29 Sep 1999, GRANTED, Pat. No. US 6177460 Continuation-in-part of Ser. No. US 1999-364021, filed on 30 Jul 1999, PENDING Division of Ser. No. US 1997-876705, filed on 16 Jun 1997, GRANTED, Pat. No. US 5932609 Division of Ser. No. US 1996-680468, filed on 15 Jul 1996, GRANTED, Pat. No. US 5932604

	NUMBER	DATE
PRIORITY INFORMATION:	US 1995-1888P	19950804 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Rose Ann Dabek, The Procter & Gamble Company, Ivorydale Technical Center, 5299 Spring Grove Avenue, Cincinnati, OH, 45217
NUMBER OF CLAIMS: 23
EXEMPLARY CLAIM: 1
LINE COUNT: 1335
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods for the treatment of cancers or viral infections in mammals are disclosed that include administration of an N-chlorophenylcarbamate, or an N-chlorophenylthiocarbamate, or a salt thereof. Such compounds may be used in combination with a chemotherapeutic agent and/or a potentiator.

L3 ANSWER 27 OF 68 USPATFULL
ACCESSION NUMBER: 2001:86489 USPATFULL
TITLE: Viral treatment
INVENTOR(S): Camden, James Berger, West Chester, OH, United States
PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6245788	B1	20010612
APPLICATION INFO.:	US 2000-535173		20000327 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1999-281895, filed on 31 Mar 1999, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Spivack, Phyllis G.
LEGAL REPRESENTATIVE: Dabek, Rose Ann, Miller, Steven W.
NUMBER OF CLAIMS: 20
EXEMPLARY CLAIM: 1
LINE COUNT: 857
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A pharmaceutical composition that inhibits or slows the infection or reinfection of animals, particularly mammals, by HIV or other

retroviruses is disclosed. The composition comprises from about 10 mg to about 6000 mg of a (5-aryl-1,2,4-thiadiazol)-3-yl thiourea derivative or (5-aryl-1,2,4-thiadiazol)-3-yl urea derivative of the formula: ##STR1##

wherein X is oxygen or sulfur, R is hydrogen or alkyl having from 1-3 carbons, n is 1-4, R.sub.1 is independently selected from the group consisting of hydrogen, alkyl having from 1 to 7 carbon atoms, chloro, bromo or fluoro, oxychloro, alkoxy having the formula --O(CH.sub.2).sub.y CH.sub.3 wherein y is from 1 to 6, or a pharmaceutically acceptable acid addition salt or prodrug thereof. The preferred compound is (5-phenyl-1,2,4-thiadazol-3-yl) thiourea

L3 ANSWER 28 OF 68 USPATFULL

ACCESSION NUMBER:	2001:29582 USPATFULL
TITLE:	Viral treatment
INVENTOR(S):	Camden, James Berger, West Chester, OH, United States Gardner, Joseph Herman, Cincinnati, OH, United States Stanton, David Thomas, Hamilton, OH, United States
PATENT ASSIGNEE(S):	The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6194430	B1	20010227
APPLICATION INFO.:	US 2000-538006		20000329 (9)

RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1999-281892, filed on 31 Mar 1999, now abandoned
DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Spivack, Phyllis G.
LEGAL REPRESENTATIVE:	Dabek, Rose Ann, Miller, Steven W.
NUMBER OF CLAIMS:	43
EXEMPLARY CLAIM:	1
LINE COUNT:	1361

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A pharmaceutical composition is disclosed to treat viral infections, particularly HIV and hepatitis, as well as to treat fungal infections of the genus cryptococcus neoformans or curvularai lunata. The composition comprises from about 10 mg to about 6000 mg of a 2-thienyl-imidazolo [4,5]pyridine of the formula: ##STR1##

wherein n is from 1 to 4, R is selected from the group consisting of hydrogen, alkyl having from 1 to 7 carbon atoms, chloro, bromo or fluoro, oxychloro, hydroxy, sulfhydryl, alkoxy having the formula --O(CH.sub.2).sub.y CH.sub.3 wherein y is from 1 to 6, the prodrugs thereof, and the pharmaceutically acceptable salts thereof. The preferred anti-viral compound is ##STR2##

or its hydrochloride salt.

L3 ANSWER 29 OF 68 USPATFULL

ACCESSION NUMBER:	2001:10922 USPATFULL
TITLE:	Method of treatment for cancer or viral infections
INVENTOR(S):	Camden, James Berger, West Chester, OH, United States
PATENT ASSIGNEE(S):	The Procter & Gamble Company, Cincinatti, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6177460	B1	20010123
APPLICATION INFO.:	US 1999-408664		19990929 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1999-364021, filed on 30 Jul 1999 Division of Ser. No. US 1997-876705, filed on 16 Jun 1997, now patented, Pat. No. US 5932609

Division of Ser. No. US 1996-680468, filed on 15 Jul 1996, now patented, Pat. No. US 5932604

Continuation-in-part of Ser. No. US 1995-420913, filed on 12 Apr 1995, now patented, Pat. No. US 5629341

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Goldberg, Jerome D.
LEGAL REPRESENTATIVE: Miller, Steven W., Dabek, Rose Ann
NUMBER OF CLAIMS: 20
EXEMPLARY CLAIM: 1
LINE COUNT: 1268
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Methods for the treatment of cancers or viral infections in mammals are disclosed that include administration of an N-chlorophenylcarbamate, or an N-chlorophenylthiocarbamate, or a salt thereof. Such compounds may be used in combination with a chemotherapeutic agent and/or a potentiator.

L3 ANSWER 30 OF 68 USPATFULL
ACCESSION NUMBER: 2001:8018 USPATFULL
TITLE: Process for the production of detersive granules
INVENTOR(S): Harth, Hubert, Perchtoldsdorf, Austria
Pfeifer, Franz, Vienna, Austria
Nitsch, Gisela, Bisamberg, Austria
Seif, Johann, Senftenberg, Austria
Senger, Herbert, Vienna, Austria
Madle, Petra-Stefanie, Vienna, Austria
PATENT ASSIGNEE(S): Henkel Kommanditgesellschaft Auf Aktien, Duesseldorf, Germany, Federal Republic of (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6174851	B1	20010116
APPLICATION INFO.:	US 1999-466594		19991217 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	DE 1998-19858859	19981219

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Douyon, Lorna M.
LEGAL REPRESENTATIVE: Jaeschke, Wayne C., Murphy, Glenn E. J.
NUMBER OF CLAIMS: 28
EXEMPLARY CLAIM: 1
LINE COUNT: 954
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Storage-stable homogeneous granules with detersive properties, which are obtained by agglomeration of one or more solids with one or more granulation liquids in a free-fall mixer divided into a mixing zone and a post-mixing zone and comprising a knock-down bar fixed to an end plate

from which it crosses the entire mixing zone and optionally extends into the post-mixing zone and are optionally aftertreated, may be produced by in situ neutralization of anionic surfactant acids. The products thus produced show distinct performance advantages, the process also having cost-efficient aspects.

L3 ANSWER 31 OF 68 USPATFULL

ACCESSION NUMBER:	2000:174390 USPATFULL
TITLE:	Carbohydrate oxidase and use thereof in baking
INVENTOR(S):	Schneider, Palle, Ballerup, Denmark Christensen, S.o slashed.ren, Copenhagen, Denmark Dybdal, Lone, K.o slashed.benhavn, Denmark Fuglsang, Claus Crone, Niv.ang., Denmark Xu, Feng, Woodland, CA, United States Golightly, Elizabeth, Davis, CA, United States
PATENT ASSIGNEE(S):	Novo Nordisk A/S, Bagsvaerd, Denmark (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6165761		20001226	
APPLICATION INFO.:	US 1998-217490		19981221	(9)

	NUMBER	DATE	
PRIORITY INFORMATION:	DK 1997-1505	19971222	
	DK 1998-763	19980604	
	US 1997-68717P	19971223	(60)
	US 1998-88725P	19980610	(60)

DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Lankford, Jr., Leon B.
LEGAL REPRESENTATIVE:	Lambiris, Elias J., Gregg, Valeta
NUMBER OF CLAIMS:	13
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	3 Drawing Figure(s); 3 Drawing Page(s)
LINE COUNT:	2426

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The properties of dough or bread can be improved by the addition of a carbohydrate oxidase which can oxidize the reducing end of an oligosaccharide more efficiently than the corresponding monosaccharide, e.g., preferentially oxidizing maltodextrins or cellodextrins over glucose. A novel carbohydrate oxidase having the capability to oxidize maltodextrins and cellodextrins more efficiently than glucose may be obtained from a strain of Microdochium, particularly M. nivale. The amino acid sequence of the novel carbohydrate oxidase has very low homology (<20% identity) with known amino acid sequences.

L3 ANSWER 32 OF 68 USPATFULL

ACCESSION NUMBER:	2000:153503 USPATFULL
TITLE:	Polypeptides having phospholipase B activity and nucleic acids encoding same
INVENTOR(S):	Harris, Paul, Davis, CA, United States Brown, Kimberly M., Elk Grove, CA, United States
PATENT ASSIGNEE(S):	Novo Nordisk Biotech, Inc., Davis, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6146869		20001114
APPLICATION INFO.:	US 1999-426072		19991021 (9)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Prouty, Rebecca E.
ASSISTANT EXAMINER: Hutson, Richard
LEGAL REPRESENTATIVE: Zelson, Esq., Steve, Starnes, Robert L., Lambiris, Esq., Elias
NUMBER OF CLAIMS: 14
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 2 Drawing Figure(s); 2 Drawing Page(s)
LINE COUNT: 2275
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to isolated polypeptides having phospholipase B activity and isolated nucleic acid sequences encoding the polypeptides. The invention also relates to nucleic acid constructs, vectors, and host cells comprising the nucleic acid sequences as well as methods for producing and using the polypeptides.

L3 ANSWER 33 OF 68 USPATFULL
ACCESSION NUMBER: 2000:150127 USPATFULL
TITLE: Built automatic dishwashing compositions comprising blooming perfume
INVENTOR(S): Trinh, Toan, Maineville, OH, United States
Bacon, Dennis Ray, Milford, OH, United States
Chung, Alex Haejoon, West Chester, OH, United States
Blondin, Patricia Ann, Fairfield, OH, United States
PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6143707		20001107
APPLICATION INFO.:	US 1998-25480		19980218 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1996-618522, filed on 19 Mar 1996, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Gupta, Yogendra
ASSISTANT EXAMINER: Mruk, Brian P.
LEGAL REPRESENTATIVE: Camp, Jason J., Aylor, Robert B.
NUMBER OF CLAIMS: 14
EXEMPLARY CLAIM: 1
LINE COUNT: 2571
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Automatic dishwashing detergent compositions comprising blooming perfume composition containing blooming perfume ingredients selected from the group consisting of: ingredients having a boiling point of less than about 260.degree. C. and a ClogP of at least about 3, and wherein said perfume composition comprises at least 5 different blooming perfume ingredients, bleaching agent, builder and optionally, bleach catalysts. Preferred automatic dishwashing compositions further comprise amylase and/or protease enzymes.

L3 ANSWER 34 OF 68 USPATFULL
ACCESSION NUMBER: 2000:142401 USPATFULL

TITLE: Methods of treatment for viral infections
INVENTOR(S): Camden, James Berger, West Chester, OH, United States
PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6136835		20001024
APPLICATION INFO.:	US 1999-394382		19990910 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1999-312948, filed on 17 May 1999
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Goldberg, Jerome D.
LEGAL REPRESENTATIVE: Rose and Dabek, Rasser, Jacobus C.
NUMBER OF CLAIMS: 6
EXEMPLARY CLAIM: 1
LINE COUNT: 1135
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods for the treatment of cancers or tumors in mammals are disclosed which uses 2-(2,4-difluorophenyl)-1,3-bis(1H-1,2,4-triazol-1-yl)propan-2-ol or derivatives thereof. A chemotherapeutic agent and/or a potentiator may be used in combination with 2-(2,4-difluorophenyl)-1,3-bis(1H-1,2,4-triazol-1-yl)propan-2-ol or derivatives thereof. 2-(2,4-Difluorophenyl)-1,3-bis(1H-1,2,4-triazol-1-yl)propan-2-ol or derivatives thereof may also be used to treat viral infections, either alone, in combination with other anti-viral agents, or in combination with a potentiator.

L3 ANSWER 35 OF 68 USPATFULL
ACCESSION NUMBER: 2000:138300 USPATFULL
TITLE: Portioned detergent composition
INVENTOR(S): Jung, Dieter, Hilden, Germany, Federal Republic of
Larson, Bernd, Erkelenz, Germany, Federal Republic of
Raehse, Wilfried, Duesseldorf, Germany, Federal Republic of
Sandkuehler, Peter, Erkelenz, Germany, Federal Republic of
Siegers, Hans-Peter, Wegberg, Germany, Federal Republic of
Welling, Hermann-Josef, Dusseldorf, Germany, Federal Republic of
PATENT ASSIGNEE(S): Henkel Kommanditgesellschaft auf Aktien, Duesseldorf, Germany, Federal Republic of (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6133214		20001017
APPLICATION INFO.:	US 1999-353666		19990715 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	DE 1998-19831703	19980715

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted

PRIMARY EXAMINER: Douyon, Lorna M.
LEGAL REPRESENTATIVE: Jaeschke, Wayne C., Murphy, Glenn E. J.
NUMBER OF CLAIMS: 19
EXEMPLARY CLAIM: 1
LINE COUNT: 853
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A portioned detergent composition in a bag of water-soluble film in which at least 70% by weight of the particles of the detergent composition have **particle sizes** above 800 .mu.m. The choice of this particular **particle size** range eliminates otherwise typical production-related problems arising out of the permeability of the bag seams and resulting difficulties.

L3 ANSWER 36 OF 68 USPATFULL
ACCESSION NUMBER: 2000:113478 USPATFULL
TITLE: Anhydrous antiperspirant cream compositions improved perfume longevity
INVENTOR(S): Bacon, Dennis Ray, Milford, OH, United States
Hollingshead, Judith Ann, Batavia, OH, United States
Rizzi, George Peter, Cincinnati, OH, United States
Tremblay, Charles Raymond, Mason, OH, United States
Welch, Timothy James, Cincinnati, OH, United States
PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6110449		20000829	
APPLICATION INFO.:	US 1999-332214		19990614	(9)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Dodson, Shelley A.
LEGAL REPRESENTATIVE: Tucker, Joan B., Elandjian, Lucy, Winter, William J.
NUMBER OF CLAIMS: 34
EXEMPLARY CLAIM: 1
LINE COUNT: 1523
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Disclosed are anhydrous antiperspirant cream compositions that have improved fragrance longevity. These compositions have a penetration force value of from about 75 gram.multidot.force to about 500 gram.multidot.force and comprise (a) antiperspirant active, and (b) a perfume/cyclodextrin inclusion complex. Also disclosed are packaged anhydrous antiperspirant cream compositions which comprise (a) antiperspirant active; (b) a perfume/cyclodextrin inclusion complex; and
(c) a dispensing package containing the composition, wherein the dispensing package comprises (i) a container body having an interior chamber and a dispensing end, and (ii) a perforated dome attached to the
dispensing end of the container body and having a plurality of openings extending through the thickness of the perforated dome and covering from
about 15% to about 80% of the total surface area of the perforated dome.

L3 ANSWER 37 OF 68 USPATFULL
ACCESSION NUMBER: 2000:21672 USPATFULL
TITLE: Pigment for electrophotographic toners and developers
INVENTOR(S): Metz, Hans Joachim, Darmstadt, Germany, Federal Republic of

Baur, Rudiger, Eppstein, Germany, Federal Republic of
Macholdt, Hans-Tobias, Darmstadt-Eberstadt, Germany, Federal Republic of
PATENT ASSIGNEE(S): Clariant GmbH, Germany, Federal Republic of (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6028178		20000222
APPLICATION INFO.:	US 1999-361075		19990726 (9)

RELATED APPLN. INFO.: Division of Ser. No. US 1997-876964, filed on 17 Jun 1997 which is a continuation-in-part of Ser. No. US 1995-536946, filed on 29 Sep 1995, now abandoned

	NUMBER	DATE
PRIORITY INFORMATION:	DE 1994-4435543	19941005

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Powers, Fiona T.
LEGAL REPRESENTATIVE: Connolly Bove Lodge & Hutz LLP
NUMBER OF CLAIMS: 10
EXEMPLARY CLAIM: 1
LINE COUNT: 1278
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Azo pigment of the formula (1) ##STR1## which has a specific surface area of the pigment powder of more than 45 m.sup.2 /g.

The azo pigment is particularly suitable as colorant in electrophotographic toners and developers, and in powder coatings and electret materials.

L3 ANSWER 38 OF 68 USPATFULL
ACCESSION NUMBER: 1999:155167 USPATFULL
TITLE: Method and apparatus for pulmonary administration of dry powder .alpha.1-antitrypsin
INVENTOR(S): Eljamal, Mohammed, San Jose, CA, United States
Patton, John S., San Carlos, CA, United States
PATENT ASSIGNEE(S): Inhale Therapeutic Systems, San Carlos, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5993783		19991130
APPLICATION INFO.:	US 1998-114713		19980713 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1996-617512, filed on 13 Mar 1996, now patented, Pat. No. US 5780014
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Bawa, Raj
LEGAL REPRESENTATIVE: Townsend and Townsend and Crew LLP
NUMBER OF CLAIMS: 46
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 5 Drawing Figure(s); 3 Drawing Page(s)
LINE COUNT: 1146
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Dry powders of .alpha.1-antitrypsin are administered pulmonarily to patients to treat, for example, certain types of emphysema. The dry powder compositions may comprise aggregates of fine particles, which aggregates are friable and break-up upon dispersion in a flowing gas

stream. Typically, the dispersed powders are captured in a chamber and subsequently inhaled by a patient for pulmonary treatment of emphysema and other conditions.

L3 ANSWER 39 OF 68 USPATFULL
ACCESSION NUMBER: 1998:138596 USPATFULL
TITLE: Photosensitive member for electrophotography
INVENTOR(S): Nagae, Suguru, Amagasaki, Japan
Wakita, Kazuko, Amagasaki, Japan
Kobayashi, Toshio, Amagasaki, Japan
Sugimoto, Yoshimi, Amagasaki, Japan
Tsunoda, Sei, Amagasaki, Japan
Hayama, Kikuo, Amagasaki, Japan
Enmanji, Koe, Amagasaki, Japan
PATENT ASSIGNEE(S): Mitsubishi Denki Kabushiki Kaisha, Tokyo, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5834147		19981110
APPLICATION INFO.:	US 1996-691305		19960802 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1994-332741, filed on 1 Nov 1994, now abandoned

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1993-276877	19931105
	JP 1993-276878	19931105
	JP 1993-276879	19931105
	JP 1994-94318	19940506

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Dote, Janis L.
LEGAL REPRESENTATIVE: Leydig, Voit & Mayer
NUMBER OF CLAIMS: 42
EXEMPLARY CLAIM: 1,25,41
NUMBER OF DRAWINGS: 1 Drawing Figure(s); 1 Drawing Page(s)
LINE COUNT: 1852
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A photosensitive member for electrophotography having excellent electrophotographic characteristics such as chargeability, photosensitivity and dark attenuation, excellent corona resistance and excellent durability, which comprises an electrically conductive support and a photosensitive layer containing a resin binder and particles of a photoconductive phthalocyanine compound dispersed in said binder, said photosensitive layer containing at least one member selected from the group consisting of an electron acceptive material, a coupling agent, an antioxidant and a hydroxyl group-containing polymer.

L3 ANSWER 40 OF 68 USPATFULL
ACCESSION NUMBER: 1998:85927 USPATFULL
TITLE: Dryer-activated fabric conditioning compositions containing uncomplexed cyclodextrin
INVENTOR(S): Trinh, Toan, Maineville, OH, United States
Tordil, Helen Bernardo, West Chester, OH, United States
PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United

States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5783552		19980721
APPLICATION INFO.:	US 1997-851758		19970506 (8)

RELATED APPLN. INFO.: Division of Ser. No. US 1996-590711, filed on 24 Jan 1996, now patented, Pat. No. US 5681506 which is a continuation of Ser. No. US 1994-278703, filed on 21 Jul 1994, now abandoned which is a continuation of Ser. No. US 1993-40703, filed on 31 Mar 1993, now abandoned

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Lieberman, Paul
ASSISTANT EXAMINER: Hardee, John R.
LEGAL REPRESENTATIVE: Aylor, Robert B.
NUMBER OF CLAIMS: 14
EXEMPLARY CLAIM: 1
LINE COUNT: 1042
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An effective amount of uncomplexed cyclodextrin, in the form of particles having **particle sizes** below about 12 microns, is incorporated into solid dryer-activated fabric conditioning compositions which are used in dryers to treat fabrics. The cyclodextrin is thereby attached to the fabrics and subsequently provides effective control of odors when they come in contact with the treated fabric. The fabric conditioning compositions can be attached to substrates to prepare an article of manufacture or be in the form of detergent compatible particles, for use with conventional laundry detergents.

L3 ANSWER 41 OF 68 USPATFULL
ACCESSION NUMBER: 1998:82329 USPATFULL
TITLE: Method and apparatus for pulmonary administration of dry powder alpha 1-antitrypsin
INVENTOR(S): Eljamal, Mohammed, San Jose, CA, United States
Patton, John S., San Carlos, CA, United States
PATENT ASSIGNEE(S): Inhale Therapeutic Systems, San Carlos, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5780014		19980714
APPLICATION INFO.:	US 1996-617512		19960313 (8)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1995-423515, filed on 14 Apr 1995, now abandoned

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Bawa, Raj
LEGAL REPRESENTATIVE: Townsend and Townsend and Crew LLP
NUMBER OF CLAIMS: 18
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 5 Drawing Figure(s); 3 Drawing Page(s)
LINE COUNT: 1043
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Methods are provided for administering .alpha.1-antitrypsin dry powder pulmonarily to a patient. In these methods, .alpha.1-antitrypsin is provided in a dry powder form which is aerosolized and administered to the patient. Apparatus are also provided for carrying out these methods.

These methods and apparatus are may generally be used in the treatment of patients suffering from .alpha.1-antitrypsin deficiency and the functional derangements of emphysema.

L3 ANSWER 42 OF 68 USPATFULL
ACCESSION NUMBER: 1998:75554 USPATFULL
TITLE: Dryer-activated fabric conditioning compositions containing uncomplexed cyclodextrin
INVENTOR(S): Trinh, Toan, Maineville, OH, United States
Tordil, Helen Bernardo, West Chester, OH, United States
PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5773408		19980630
APPLICATION INFO.:	US 1997-840527		19970422 (8)

RELATED APPLN. INFO.: Division of Ser. No. US 1996-590711, filed on 24 Jan 1996, now patented, Pat. No. US 5681806 which is a continuation of Ser. No. US 1994-278703, filed on 21 Jul 1994, now abandoned which is a continuation of Ser. No. US 1993-40703, filed on 31 Mar 1993, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Lieberman, Paul
ASSISTANT EXAMINER: Hardee, John R.
LEGAL REPRESENTATIVE: Aylor, Robert B.
NUMBER OF CLAIMS: 10
EXEMPLARY CLAIM: 1
LINE COUNT: 1033
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB An effective amount of uncomplexed cyclodextrin, in the form of particles having **particle sizes** below about 12 microns, is incorporated into solid dryer-activated fabric conditioning compositions which are used in dryers to treat fabrics. The cyclodextrin is thereby attached to the fabrics and subsequently provides effective control of odors when they come in contact with the treated fabric. The fabric conditioning compositions can be attached to substrates to prepare an article of manufacture or be in the form of detergent compatible particles, for use with conventional laundry detergents.

L3 ANSWER 43 OF 68 USPATFULL
ACCESSION NUMBER: 1998:33314 USPATFULL
TITLE: Absorbent articles for odor control with positive scent signal
INVENTOR(S): Brunner, Gordon Francis, Cincinnati, OH, United States
Trinh, Toan, Maineville, OH, United States
Inglin, Thomas Alfred, Hamilton, OH, United States
PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5733272		19980331
APPLICATION INFO.:	US 1995-469153		19950606 (8)

RELATED APPLN. INFO.: Division of Ser. No. US 1993-40705, filed on 31 Mar

1993
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Weiss, John G.
ASSISTANT EXAMINER: Cho, David J.
LEGAL REPRESENTATIVE: Aylor, Robert B.
NUMBER OF CLAIMS: 23
EXEMPLARY CLAIM: 1
LINE COUNT: 1449
AB The present invention comprises compositions and articles such as catamenials, diapers, pantiliners, adult incontinence garments, and underarm shields which minimize odor caused by body fluids and which provide a pleasant scent signal to indicate that the odor is being removed. This scent signal, provided by cyclodextrin/perfume inclusion complexes and/or matrix perfume microcapsules, assures the wearer that the product is working.

L3 ANSWER 44 OF 68 USPATFULL
ACCESSION NUMBER: 1998:11987 USPATFULL
TITLE: Articles containing small **particle size** cyclodextrin for odor control
INVENTOR(S): Trinh, Toan, Maineville, OH, United States
Phan, Dean Van, West Chester, OH, United States
PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5714445		19980203
APPLICATION INFO.:	US 1996-704319		19960912 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1994-328645, filed on 25 Oct 1994, now abandoned which is a division of Ser. No. US 1993-40822, filed on 31 Mar 1993, now patented, Pat. No. US 5429628
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Caldarola, Glenn
ASSISTANT EXAMINER: Ghyka, Alexander G.
LEGAL REPRESENTATIVE: Aylor, Robert B.
NUMBER OF CLAIMS: 15
EXEMPLARY CLAIM: 1
LINE COUNT: 1715
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to compositions and articles such as catamenials, diapers, pantiliners, paper towels, tissues, underarm shields, etc., which minimize odor caused from body fluids through the incorporation of an effective amount of cyclodextrin, having a **particle size** of less than 12 microns. Combinations of small **particle size** cyclodextrins with other odor-controlling materials are also disclosed.

L3 ANSWER 45 OF 68 USPATFULL
ACCESSION NUMBER: 97:109863 USPATFULL
TITLE: Perfume delivery system comprising zeolites
INVENTOR(S): Pan, Robert Ya-Lin, Cincinnati, OH, United States
You, Jing-Feng, West Chester, OH, United States
Caravajal, Gregory Stephen, Fairfield, OH, United States

Graves, Sharon Anne, Lawrenceburg, IN, United States
Mueller, William Richard, Lawrenceburg, IN, United States
PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5691303		19971125
APPLICATION INFO.:	US 1995-394931		19950227 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1993-71124, filed on 2 Jun 1993, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Reamer, James H.
LEGAL REPRESENTATIVE: Bolam, Brian M., Zerby, Kim William, Yetter, Jerry J.
NUMBER OF CLAIMS: 12
EXEMPLARY CLAIM: 1
LINE COUNT: 834
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Granular detergent compositions comprise conventional ingredients and a perfume delivery system which comprises Type X or Type Y Zeolites having a perfume releasably adsorbed within their pores, and a barrier matrix comprising a fluid polyol or diol which is insoluble with the perfume and a solid polyol containing more than three hydroxyl moieties. Methods of depositing said perfume onto fabric surfaces are disclosed.

L3 ANSWER 46 OF 68 USPATFULL
ACCESSION NUMBER: 97:99257 USPATFULL
TITLE: Dryer-activated fabric conditioning compositions containing uncomplexed cyclodextrin
INVENTOR(S): Trinh, Toan, Maineville, OH, United States
Tordil, Helen Bernardo, West Chester, OH, United States
PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5681806		19971028
APPLICATION INFO.:	US 1996-590711		19960124 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1994-278703, filed on 21 Jul 1994, now abandoned which is a continuation of Ser. No. US 1993-40703, filed on 31 Mar 1993, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Lieberman, Paul
ASSISTANT EXAMINER: Hardee, John R.
LEGAL REPRESENTATIVE: Aylor, Robert B.
NUMBER OF CLAIMS: 14
EXEMPLARY CLAIM: 1
LINE COUNT: 1055
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB An effective amount of uncomplexed cyclodextrin, in the form of particles having **particle sizes** below about 5 microns, is incorporated into solid dryer-activated fabric conditioning compositions which are used in dryers to treat fabrics. The cyclodextrin

is thereby attached to the fabrics and subsequently provides effective control of odors when they come in contact with the treated fabric. The fabric conditioning compositions can be attached to substrates to prepare an article of manufacture or be in the form of detergent compatible particles, for use with conventional laundry detergents.

L3 ANSWER 47 OF 68 USPATFULL

ACCESSION NUMBER: 97:83929 USPATFULL

TITLE: Biodegradable fabric softener compositions with improved perfume longevity

INVENTOR(S): Severns, John Cort, West Chester, OH, United States
Sivik, Mark Robert, Fairfield, OH, United States
Hartman, Frederick Anthony, Cincinnati, OH, United States
Denutte, Hugo Robert Germain, Hofstade, Belgium
Costa, Jill Bonham, Cincinnati, OH, United States
Chung, Alex Haejoon, West Chester, OH, United States
Ortiz, Rafael, Cincinnati, OH, United States

PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5668102		19970916
APPLICATION INFO.:	US 1996-672880		19960628 (8)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1995-499282, filed on 7 Jul 1995, now patented, Pat. No. US 5531910

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Lieberman, Paul
ASSISTANT EXAMINER: Boyer, Charles I.
LEGAL REPRESENTATIVE: Krivulka, Thomas G.
NUMBER OF CLAIMS: 15
EXEMPLARY CLAIM: 1
LINE COUNT: 2197
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to liquid and solid biodegradable fabric softener compositions combined with nonionic or anionic esters of a non-allylic alcohol perfumes. These compositions exhibit improved perfume longevity and reduced environmental impact.

L3 ANSWER 48 OF 68 USPATFULL

ACCESSION NUMBER: 97:75833 USPATFULL

TITLE: Solid consumer product compositions containing small particle cyclodextrin complexes

INVENTOR(S): Trinh, Toan, Maineville, OH, United States
Gardlik, John Michael, Cincinnati, OH, United States

PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5660845		19970826
APPLICATION INFO.:	US 1996-658329		19960605 (8)

RELATED APPLN. INFO.: Division of Ser. No. US 1995-477338, filed on 7 Jun 1995, now patented, Pat. No. US 5543157 which is a division of Ser. No. US 1994-268157, filed on 29 Jun 1994, now patented, Pat. No. US 5552378 which is a continuation of Ser. No. US 1991-707266, filed on 24 May 1991, now abandoned which is a continuation of

Ser.

No. US 1990-486757, filed on 6 Mar 1990, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Reamer, James H.
LEGAL REPRESENTATIVE: Aylor, Robert B.
NUMBER OF CLAIMS: 4
EXEMPLARY CLAIM: 1
LINE COUNT: 1273
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB An effective amount of active/cyclodextrin complex, in the form of particles having **particle sizes** below about 12 microns, is incorporated into solid consumer product compositions. The complexes provide fast release of the active when they are wetted even when the amount of water available to effect release of the active is limited as in personal use compositions like drugs, foods, and cosmetics where active release is typically effected by body fluids. Preferred actives include perfumes, flavors, and pharmaceutical materials that are used by consumers.

L3 ANSWER 49 OF 68 USPATFULL
ACCESSION NUMBER: 97:66095 USPATFULL
TITLE: Fabric softener compositions with improved environmental impact
INVENTOR(S): Bacon, Dennis Ray, Milford, OH, United States
Chung, Alex Haejoon, West Chester, OH, United States
Trinh, Toan, Maineville, OH, United States
PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5652206		19970729	
APPLICATION INFO.:	US 1996-605482		19960226	(8)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Green, Anthony
LEGAL REPRESENTATIVE: Aylor, Robert B.
NUMBER OF CLAIMS: 26
EXEMPLARY CLAIM: 1
LINE COUNT: 2339
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to liquid and solid biodegradable fabric softener compositions combined with highly enduring substantive perfume compositions. These enduring perfume compositions comprise at least about 70% of enduring perfume ingredients. These compositions provide better perfume deposition on treated fabric, and consequently are not substantially lost during the rinse and drying cycle for less impact on the environment. Also, these perfumes improve the physical stability of the softener composition.

L3 ANSWER 50 OF 68 USPATFULL
ACCESSION NUMBER: 97:65850 USPATFULL
TITLE: Process of preparing coated calcium/oxyanion-containing particles
INVENTOR(S): Nosco, Dennis L., Florissant, MO, United States
Nema, Sandeep, St. Louis, MO, United States
Kilbanov, Alexander L., St. Louis, MO, United States

	Adzamli, Kofi, Chesterfield, MO, United States
PATENT ASSIGNEE(S):	Mallinckrodt Medical, Inc., St. Louis, MO, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5651956		19970729
APPLICATION INFO.:	US 1996-582781		19960104 (8)

RELATED APPLN. INFO.:	Division of Ser. No. US 1995-379063, filed on 27 Jan 1995, now patented, Pat. No. US 5520904
DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Hollinden, Gary E.
LEGAL REPRESENTATIVE:	Stierwalt, Brian K.
NUMBER OF CLAIMS:	5
EXEMPLARY CLAIM:	1
LINE COUNT:	631

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides new and structurally diverse particulates for use in magnetic resonance imaging and X-ray contrast imaging of body organs and tissues having the following general formula:

Ca.sub.n M.sub.m X.sub.r Y.sub.s

wherein M is a paramagnetic ion or stoichiometric mixture of metal ions having a valence of 2+ or 3+; X is a simple anion; Y is a tetrahedral oxyanion, or mixtures thereof; m is an integer greater than or equal to 1; n is an integer greater than or equal to 1; r and s are integers and are adjusted as needed to provide charge neutrality; and further comprising a polyalkoxy compound.

Methods for using and making particles of the invention are also disclosed.

L3 ANSWER 51 OF 68 USPATFULL

ACCESSION NUMBER:	97:47153 USPATFULL
TITLE:	Solid consumer product compositions containing small particle cyclodextrin complexes
INVENTOR(S):	Trinh, Toan, Maineville, OH, United States Gardlik, John M., Cincinnati, OH, United States
PATENT ASSIGNEE(S):	The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5635238		19970603
APPLICATION INFO.:	US 1995-474859		19950607 (8)

RELATED APPLN. INFO.:	Division of Ser. No. US 1994-268157, filed on 29 Jun 1994, now patented, Pat. No. US 5552378 which is a continuation of Ser. No. US 1991-707266, filed on 24 May 1991, now abandoned which is a continuation of Ser. No. US 1990-486757, filed on 6 Mar 1990, now abandoned
DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Reamer, James H.
LEGAL REPRESENTATIVE:	Aylor, Robert B.
NUMBER OF CLAIMS:	16

EXEMPLARY CLAIM: 1
LINE COUNT: 1301
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB An effective amount of active/cyclodextrin complex, in the form of particles having **particle sizes** below about 12 microns, is incorporated into solid consumer product compositions. The complexes provide fast release of the active when they are wetted even when the amount of water available to effect release of the active is limited as in personal use compositions like drugs, foods, and cosmetics where active release is typically effected by body fluids. Preferred actives include perfumes, flavors, and pharmaceutical materials that are used by consumers.

L3 ANSWER 52 OF 68 USPATFULL

ACCESSION NUMBER:	96:111441 USPATFULL
TITLE:	Solid consumer product compositions containing small particle cyclodextrin complexes
INVENTOR(S):	Trinh, Toan, Maineville, OH, United States Gardlik, John M., Cincinnati, OH, United States
PATENT ASSIGNEE(S):	The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5580851		19961203
APPLICATION INFO.:	US 1995-474599		19950607 (8)

RELATED APPLN. INFO.: Division of Ser. No. US 1994-268157, filed on 29 Jun 1994 which is a continuation of Ser. No. US 1991-707266, filed on 24 May 1991, now abandoned which is a continuation of Ser. No. US 1990-486757, filed on 6 Mar 1990, now abandoned

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Reamer, James H.
LEGAL REPRESENTATIVE: Aylor, Robert B.
NUMBER OF CLAIMS: 7
EXEMPLARY CLAIM: 1
LINE COUNT: 1257
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB An effective amount of active/cyclodextrin complex, in the form of particles having **particle sizes** below about 12 microns, is incorporated into solid consumer product compositions. The complexes provide fast release of the active when they are wetted even when the amount of water available to effect release of the active is limited as in personal use compositions like drugs, foods, and cosmetics where active release is typically effected by body fluids. Preferred actives include perfumes, flavors, and pharmaceutical materials that are used by consumers.

L3 ANSWER 53 OF 68 USPATFULL

ACCESSION NUMBER:	96:101548 USPATFULL
TITLE:	Solid consumer product compositions containing small particle cyclodextrin complexes
INVENTOR(S):	Trinh, Toan, Maineville, OH, United States Gardlik, John M., Cincinnati, OH, United States
PATENT ASSIGNEE(S):	The Procter & Gamble Company, Cincinnati, OH, United

States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5571782		19961105
APPLICATION INFO.:	US 1995-475307		19950607 (8)

RELATED APPLN. INFO.: Division of Ser. No. US 1994-268157, filed on 29 Jun 1994 which is a continuation of Ser. No. US 1991-707266, filed on 24 May 1991, now abandoned which is a continuation of Ser. No. US 1990-486757, filed on 6 Mar 1990, now abandoned

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Reamer, James H.
LEGAL REPRESENTATIVE: Aylor, Robert B.
NUMBER OF CLAIMS: 4
EXEMPLARY CLAIM: 1
LINE COUNT: 1256
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An effective amount of active/cyclodextrin complex, in the form of particles having **particle sizes** below about 12 microns, is incorporated into solid consumer product compositions. The complexes provide fast release of the active when they are wetted even when the amount of water available to effect release of the active is limited as in personal use compositions like drugs, foods, and cosmetics where active release is typically effected by body fluids. Preferred actives include perfumes, flavors, and pharmaceutical materials that are used by consumers.

L3 ANSWER 54 OF 68 USPATFULL
ACCESSION NUMBER: 96:80246 USPATFULL
TITLE: Solid consumer product compositions containing small particle cyclodextrin complexes
INVENTOR(S): Trinh, Toan, Maineville, OH, United States
Gardlik, John M., Cincinnati, OH, United States
PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5552378		19960903
APPLICATION INFO.:	US 1994-268157		19940629 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1991-707266, filed on 24 May 1991, now abandoned which is a continuation of Ser. No. US 1990-486757, filed on 6 Mar 1990, now abandoned

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Reamer, James H.
LEGAL REPRESENTATIVE: Aylor, Robert B.
NUMBER OF CLAIMS: 22
EXEMPLARY CLAIM: 1
LINE COUNT: 1329
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An effective amount of active/cyclodextrin complex, in the form of particles having **particle sizes** below about 12 microns, is incorporated into solid consumer product compositions. The complexes provide fast release of the active when they are wetted even

when the amount of water available to effect release of the active is limited as in personal use compositions like drugs, foods, and cosmetics where active release is typically effected by body fluids. Preferred actives include perfumes, flavors, and pharmaceutical materials that are used by consumers.

L3 ANSWER 55 OF 68 USPATFULL

ACCESSION NUMBER:	96:70203 USPATFULL
TITLE:	Solid consumer product compositions containing small particle clyclodextrin complexes
INVENTOR(S):	Trinh, Toan, Maineville, OH, United States Gardlik, John M., Cincinnati, OH, United States
PATENT ASSIGNEE(S):	The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5543157		19960806
APPLICATION INFO.:	US 1995-477338		19950607 (8)

RELATED APPLN. INFO.: Division of Ser. No. US 1994-268157, filed on 29 Jun 1994 which is a continuation of Ser. No. US 1991-707266, filed on 24 May 1991, now abandoned which is a continuation of Ser. No. US 1990-486757, filed on 6 Mar 1990, now abandoned

DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Reamer, James H.
LEGAL REPRESENTATIVE:	Aylor, Robert B.
NUMBER OF CLAIMS:	7
EXEMPLARY CLAIM:	1
LINE COUNT:	1271

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An effective amount of active/cyclodextrin complex, in the form of particles having **particle sizes** below about 12 microns, is incorporated into solid consumer product compositions. The complexes provide fast release of the active when they are wetted even when the amount of water available to effect release of the active is limited as in personal use compositions like drugs, foods, and cosmetics where active release is typically effected by body fluids. Preferred actives include perfumes, flavors, and pharmaceutical materials that are used by consumers.

L3 ANSWER 56 OF 68 USPATFULL

ACCESSION NUMBER:	96:57890 USPATFULL
TITLE:	Biodegradable fabric softener compositions with improved perfume longevity
INVENTOR(S):	Severns, John C., West Chester, OH, United States Sivik, Mark R., Fairfield, OH, United States Hartman, Frederick A., Cincinnati, OH, United States Denutte, Hugo R. G., Hofstade, Belgium Costa, Jill B., Cincinnati, OH, United States Chung, Alex H., West Chester, OH, United States
PATENT ASSIGNEE(S):	The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5531910		19960702
APPLICATION INFO.:	US 1995-499282		19950707 (8)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Lieberman, Paul
ASSISTANT EXAMINER: Tierney, Michael P.
LEGAL REPRESENTATIVE: Krivulka, Thomas G.
NUMBER OF CLAIMS: 16
EXEMPLARY CLAIM: 1
LINE COUNT: 1969
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to liquid and solid biodegradable fabric softener compositions combined with nonionic or anionic esters of a non-allylic alcohol perfumes. These compositions exhibit improved perfume longevity and reduced enviromental impact.

L3 ANSWER 57 OF 68 USPATFULL
ACCESSION NUMBER: 96:45770 USPATFULL
TITLE: Calcium/oxyanion-containing particles with a polymerical alkoxy coating for use in medical diagnostic imaging
INVENTOR(S): Nosco, Dennis L., Florissant, MO, United States
Nema, Sandeep, St. Louis, MO, United States
Klibanov, Alexander L., St. Louis, MO, United States
Adzamli, Kofi, Chesterfield, MO, United States
PATENT ASSIGNEE(S): Mallinckrodt Medical, Inc., St. Louis, MO, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5520904		19960528
APPLICATION INFO.:	US 1995-379063		19950127 (8)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Hollinden, Gary E.
LEGAL REPRESENTATIVE: Stierwalt, Brian K.
NUMBER OF CLAIMS: 52
EXEMPLARY CLAIM: 1
LINE COUNT: 812
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides new and structurally diverse particulates
for use in magnetic resonance imaging and X-ray contrast imaging of body
organs and tissues having the following general formula:

Ca.sub.n M.sub.m X.sub.r Y.sub.s

wherein M is a paramagnetic ion or stoichiometric mixture of metal ions having a valence of 2+ or 3+; X is a simple anion; Y is a tetrahedral oxyanion, or mixtures thereof; m is an integer greater than or equal to 1; n is an integer greater than or equal to 1; r and s are integers and are adjusted as needed to provide charge neutrality; and further comprising a polyalkoxy compound.

Methods for using and making particles of the invention are also disclosed.

L3 ANSWER 58 OF 68 USPATFULL

ACCESSION NUMBER: 96:29201 USPATFULL
TITLE: Solid particulate fabric softener composition containing biodegradable cationic ester fabric softener active and acidic pH modifier
INVENTOR(S): Bacon, Dennis R., Milford, OH, United States
Trinh, Toan, Maineville, OH, United States
PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5505866		19960409	
APPLICATION INFO.:	US 1994-320479		19941007	(8)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Green, Anthony
LEGAL REPRESENTATIVE: Aylor, Robert B., Yetter, Jerry J., Rasser, Jacobus C.
NUMBER OF CLAIMS: 32
EXEMPLARY CLAIM: 1
LINE COUNT: 1294
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Improved solid particulate, granular fabric softening compositions contain biodegradable cationic ester fabric softener actives, especially quaternary ammonium softeners containing two long hydrophobic chains interrupted by ester linkages, and acidic pH modifier, in an effective amount to provide a pH, when the particulate compositions are diluted with water to make liquid softener compositions, of from about 2 to about 5. The solid particulate, granular fabric softening compositions, when added to water, form chemically stable dilute, or concentrated liquid, softener compositions.

L3 ANSWER 59 OF 68 USPATFULL
ACCESSION NUMBER: 96:22824 USPATFULL
TITLE: Fabric softener compositions with improved environmental impact
INVENTOR(S): Bacon, Dennis R., Milford, OH, United States
Trinh, Toan, Maineville, OH, United States
PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5500138		19960319	
APPLICATION INFO.:	US 1994-326555		19941020	(8)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Green, Anthony
LEGAL REPRESENTATIVE: Aylor, Robert B.
NUMBER OF CLAIMS: 34
EXEMPLARY CLAIM: 1
LINE COUNT: 2027
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to liquid and solid biodegradable fabric softener compositions combined with highly enduring substantive perfumes. These compositions are naturally, or synthetically, derived perfumes which are hydrophobic, defined by having a low rinse water solubility (ClogP is greater than or equal to 3.0). These perfumes also have low volatility, a boiling point of 250.degree. C., or greater.

These compositions provide better perfume deposition on treated fabric, and consequently are not substantially lost during the rinse and drying cycle for less impact on the environment. Also, these perfumes improve the physical stability of the softener composition.

L3 ANSWER 60 OF 68 USPATFULL
ACCESSION NUMBER: 95:59969 USPATFULL
TITLE: Articles containing small **particle size** cyclodextrin for odor control
INVENTOR(S): Trinh, Toan, Maineville, OH, United States
Phan, Dean V., West Chester, OH, United States
PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5429628		19950704	
APPLICATION INFO.:	US 1993-40822		19930331	(8)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Kruter, Jerome L.
LEGAL REPRESENTATIVE: Lewis, Beth Goldstein, Zea, Betty J.
NUMBER OF CLAIMS: 23
EXEMPLARY CLAIM: 1
LINE COUNT: 1783
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to compositions and articles such as catamenials, diapers, pantiliners, paper towels, tissues, underarm shields, etc., which minimize odor caused from body fluids through the incorporation of an effective amount of cyclodextrin, having a **particle size** of less than 12 microns. Combinations of small **particle size** cyclodextrins with other odor-controlling materials are also disclosed.

L3 ANSWER 61 OF 68 USPATFULL
ACCESSION NUMBER: 94:81965 USPATFULL
TITLE: Process for producing dryer-added fabric softener sheets containing cyclodextrin complexes
INVENTOR(S): Bacon, Dennis R., Milford, OH, United States
Borcher, Sr., Thomas A., Cincinnati, OH, United States
Corona, III, Alessandro, Maineville, OH, United States
Palmer, Clyde D., Cincinnati, OH, United States
Trinh, Toan, Maineville, OH, United States
PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5348667		19940920	
APPLICATION INFO.:	US 1993-134163		19931008	(8)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Bell, Mark L.
ASSISTANT EXAMINER: Bonner, C. M.
LEGAL REPRESENTATIVE: Aylor, Robert B.
NUMBER OF CLAIMS: 23
EXEMPLARY CLAIM: 1
LINE COUNT: 902
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Cyclodextrin complexes are prepared utilizing processes in which the

cyclodextrin/active complex is prepared under concentrated reaction conditions in which there is no more than about 40% solvent, e.g., water, with mechanical working, to provide a complex ultimate **particle size** of less than about 12 microns and the resulting complex reaction mixture is incorporated, preferably without further operation, into at least one fabric conditioning material, preferably cationic fabric conditioning active, preferably in liquid (molten) form, preferably at a temperature between about 60 and about 95.degree. C., and mechanically worked to reduce complex aggregate **particle size** below about 200 microns. The resulting complex/fabric conditioning material mixture is used to prepare, e.g., dryer-added fabric softener article, e.g., sheet. The mixture of complex and fabric softener material preferably contains a small amount of an anionic surfactant to help avoid deposition of, e.g., unreacted cyclodextrin onto the equipment used to prepare the fabric conditioning composition and/or article (sheet).

L3 ANSWER 62 OF 68 USPATFULL

ACCESSION NUMBER:	93:65085 USPATFULL
TITLE:	Treatment of fabric with perfume/cyclodextrin complexes
INVENTOR(S):	Gardlik, John M., Cincinnati, OH, United States Trinh, Toan, Maineville, OH, United States Banks, Todd J., West Chester, OH, United States Benvegnu, Fernando, Maineville, OH, United States
PATENT ASSIGNEE(S):	The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5234610		19930810
APPLICATION INFO.:	US 1991-809184		19911217 (7)
RELATED APPLN. INFO.:	Division of Ser. No. US 1989-337036, filed on 12 Apr 1989, now patented, Pat. No. US 5102564		

DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Willis, Jr., Prince
LEGAL REPRESENTATIVE:	Aylor, Robert B.
NUMBER OF CLAIMS:	35
EXEMPLARY CLAIM:	1
LINE COUNT:	2213

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An effective amount of perfume/cyclodextrin complex is applied to fabric that is preferably at least partially wetted. A preferred method applies said complex to said fabric in an automatic laundry dryer. The perfume/cyclodextrin complexes are preferably incorporated into solid, dryer-activated, fabric treatment (conditioning) compositions, preferably containing fabric softeners, more preferably cationic and/or nonionic fabric softeners. The complexes provide fabrics with perfume benefits when they are rewetted after drying. Volatile perfume materials, including those materials that are commonly associated with "freshness" can be applied to the fabrics in an effective way. Clay provides protection for said perfume/cyclodextrin complexes, especially when certain materials like some nonionic fabric softeners and/or fatty acids are present and in contact with said perfume/cyclodextrin complexes.

L3 ANSWER 63 OF 68 USPATFULL
ACCESSION NUMBER: 93:56725 USPATFULL
TITLE: Method of controlling release of sucralose in chewing gum using cellulose derivatives and gum produced thereby
INVENTOR(S): Song, Joo H., Northbrook, IL, United States
Record, David W., River Forest, IL, United States
Broderick, Kevin B., Berwyn, IL, United States
Sundstrom, Christafor E., Glen Ellyn, IL, United States
PATENT ASSIGNEE(S): Wm. Wrigley Jr. Company, Chicago, IL, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5227182		19930713	
APPLICATION INFO.:	US 1992-844719		19920302	(7)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1991-721616, filed on 17 Jul 1991, now patented, Pat. No. US 5139798
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Hunter, Jeanette
LEGAL REPRESENTATIVE: Willian Brinks Olds Hofer Gilson & Lione
NUMBER OF CLAIMS: 19
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 3 Drawing Figure(s); 3 Drawing Page(s)
LINE COUNT: 632
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention is a method for producing a chewing gum with a delayed release sucralose sweetener, as well as the chewing gum so produced. The delayed release sucralose sweetener is obtained by physically modifying sucralose's properties by coating and drying. Sucralose sweetener is dissolved in a solvent and coated onto a cellulose derivative such as hydroxypropyl cellulose by agglomerating the cellulose derivative with the sucralose solution. The agglomerated material preferably includes an absorption material such as silica. The agglomerated sweetener is then dried and preferably particle sized to produce a release-modified sucralose high-intensity sweetener. When incorporated into the chewing gum, these particles are adapted to enhance the shelf stability of the sweetener and/or produce a delayed release when the gum is chewed.

L3 ANSWER 64 OF 68 USPATFULL
ACCESSION NUMBER: 92:27212 USPATFULL
TITLE: Treatment of fabric with perfume/cyclodextrin complexes
INVENTOR(S): Gardlik, John M., Cincinnati, OH, United States
Trinh, Toan, Maineville, OH, United States
Banks, Todd J., West Chester, OH, United States
Benvegnu, Fernando, Maineville, OH, United States
PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5102564		19920407	
APPLICATION INFO.:	US 1989-337036		19890412	(7)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Willis, Jr., Prince

ASSISTANT EXAMINER: McNally, John F.
LEGAL REPRESENTATIVE: Aylor, Robert B., Witte, Richard C.
NUMBER OF CLAIMS: 5
EXEMPLARY CLAIM: 1
LINE COUNT: 2076
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB An effective amount of perfume/cyclodextrin complex is applied to fabric
that is preferably at least partially wetted. A preferred method applies
said complex to said fabric in an automatic laundry dryer. The perfume/cyclodextrin complexes are preferably incorporated into solid, dryer-activated, fabric treatment (conditioning) compositions, preferably containing fabric softeners, more preferably cationic and/or nonionic fabric softeners. The complexes provide fabrics with perfume benefits when they are rewetted after drying. Volatile perfume materials
including those materials that are commonly associated with "freshness" can be applied to the fabrics in an effective way. Clay provides protection for said perfume/cyclodextrin complexes, especially when certain materials like some nonionic fabric softeners and/or fatty acids
are present and in contact with said perfume/cyclodextrin complexes.

L3 ANSWER 65 OF 68 USPATFULL
ACCESSION NUMBER: 92:18708 USPATFULL
TITLE: Treatment of fabric with perfume/cyclodextrin complexes
INVENTOR(S): Trinh, Toan, Maineville, OH, United States
Gardlik, John M., Cincinnati, OH, United States
Banks, Todd J., West Chester, OH, United States
Benvegnu, Fernando, Maineville, OH, United States
PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5094761		19920310	
APPLICATION INFO.:	US 1989-337037		19890412	(7)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Willis, Jr., Prince
ASSISTANT EXAMINER: McNally, John F.
LEGAL REPRESENTATIVE: Aylor, Robert B., Witte, Richard C.
NUMBER OF CLAIMS: 28
EXEMPLARY CLAIM: 1
LINE COUNT: 2175
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB An effective amount of perfume/cyclodextrin complex is applied to fabric
that is preferably at least partially wetted. A preferred method applies
said complex to said fabric in an automatic laundry dryer. The perfume/cyclodextrin complexes are preferably incorporated into solid, dryer-activated, fabric treatment (conditioning) composition, preferably
containing fabric softeners, more preferably cationic and/or nonionic fabric softeners. The complexes provide fabrics with perfume benefits when they are rewetted after drying. Volatile perfume materials, including those materials that are commonly associated with "freshness"

can be applied to the fabrics in an effective way. Clay provides protection for said perfume/cyclodextrin complexes, especially when certain materials like some nonionic fabric softeners and/or fatty acids
are present and in contact with said perfrum/cyclodextrin complexes.

L3 ANSWER 66 OF 68 USPATFULL

ACCESSION NUMBER:	91:62624 USPATFULL		
TITLE:	Functional decholesterolized egg yolks		
INVENTOR(S):	Merchant, Zohar M., Wilmette, IL, United States Gaonkar, Anilkumar G., Vernon Hills, IL, United States Krishnamurthy, R. G., Glenview, IL, United States		
PATENT ASSIGNEE(S):	Kraft General Foods, Inc., Glenview, IL, United States (U.S. corporation)		
	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5037661		19910806
APPLICATION INFO.:	US 1990-494764		19900316 (7)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Cintins, Marianne		
LEGAL REPRESENTATIVE:	Fitch, Even, Tabin & Flannery		
NUMBER OF CLAIMS:	9		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	12 Drawing Figure(s); 5 Drawing Page(s)		
LINE COUNT:	796		

AB The invention herein is a method of reducing cholesterol in egg yolks by
extracting cholesterol with substantially low moisture alcohol extractant and then hydrolyzing with selected proteolytic enzymes, such that the resulting product is useful in producing emulsified products like mayonnaise, salad dressings, and the like.

L3 ANSWER 67 OF 68 USPATFULL

ACCESSION NUMBER:	90:27972 USPATFULL		
TITLE:	Taste-masking pharmaceutical agents		
INVENTOR(S):	Patell, Mahesh K., Edison, NJ, United States		
PATENT ASSIGNEE(S):	Bristol-Myers Squibb, New York, NY, United States (U.S. corporation)		
	NUMBER	KIND	DATE
PATENT INFORMATION:	US 4916161		19900410
APPLICATION INFO.:	US 1988-262911		19881025 (7)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Kight, John		
ASSISTANT EXAMINER:	Nutter, Nathan M.		
LEGAL REPRESENTATIVE:	Nolan, Sandra M.		
NUMBER OF CLAIMS:	13		
EXEMPLARY CLAIM:	1		
LINE COUNT:	303		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The unpleasant taste of ibuprofen or other bad-tasting pharmaceuticals can be mediated via wet granulation using certain taste masking agents.

L3 ANSWER 68 OF 68 USPATFULL

ACCESSION NUMBER: 87:45038 USPATFULL

TITLE: Mono-core type microcapsules and process for producing them

INVENTOR(S): Ohkawara, Masaaki, Yokohama, Japan
Miyahara, Masayuki, Tama, Japan
Ono, Yoshitaka, Chiba, Japan

PATENT ASSIGNEE(S): Ohkawara Kokohki Co., Ltd., Yokohama, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 4675236		19870623	
APPLICATION INFO.:	US 1985-793003		19851030	(6)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1985-13648	19850129

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Lovering, Richard D.
LEGAL REPRESENTATIVE: Armstrong, Nikaido, Marmelstein & Kubovcik
NUMBER OF CLAIMS: 7
EXEMPLARY CLAIM: 1,2
NUMBER OF DRAWINGS: 13 Drawing Figure(s); 4 Drawing Page(s)
LINE COUNT: 424
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This microcapsules are mono-core type microcapsules with **particle size** from 5 .mu.m to 5 mm on which waxes are coated as the layer on the surface of the particles and/or penetrated to the inside of the particles, in which said wax coating is prepared by once melting the wax particles over the surface of the core particles and then re-solidifying them.

The core material of the microcapsule undergoes less thermal degradation and can be formed with a dense and thin membrane profiling the surface layer thereof with a use of lesser amount of waxes.

=>

=> s (modified cyclodextrin)(p)(double drum dryer)
L5 0 (MODIFIED CYCLODEXTRIN)(P)(DOUBLE DRUM DRYER)

=> s (modified cyclodextrin)(p)(drum dry?)
L6 0 (MODIFIED CYCLODEXTRIN)(P)(DRUM DRY?)

=> s cyclodextrin(p)(drum dry?)
L7 5 CYCLODEXTRIN(P)(DRUM DRY?)

=> d l7 1-5 ibib ab

L7 ANSWER 1 OF 5 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 1992-183333 [22] WPIDS
CROSS REFERENCE: 1995-230865 [30]; 1995-319453 [41]
DOC. NO. CPI: C1992-083947
TITLE: Cooked cured meat pigments prodn. - by treating red blood cells with nitrosating and reducing agents and treating prod. with stabiliser.

DERWENT CLASS: D12 E24
INVENTOR(S): PEGG, R B; SHAHIDI, F
PATENT ASSIGNEE(S): (PEGG-I) PEGG R B; (SHAH-I) SHAHIDI F; (SEAB-N) SEABRIGHT
CORP LTD
COUNTRY COUNT: 26
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9207476	A1	19920514	(199222)*	EN	86
RW: AT BE CH DE DK ES FR GB GR IT LU NL SE					
W: AU BG BR CA FI HU JP KR NO PL RO SU					
AU 9187212	A	19920526	(199235)		
US 5230915	A	19930727	(199331)		33
EP 554283	A1	19930811	(199332)	EN	86
R: GB					
EP 554283	B1	19950830	(199539)	EN	68
R: GB					
CA 2093223	C	19990209	(199917)		

APPLICATION DETAILS:

PATENT NO	KIND		APPLICATION	DATE
WO 9207476	A1		WO 1991-CA377	19911024
AU 9187212	A		AU 1991-87212	19911024
			WO 1991-CA377	19911024
US 5230915	A	CIP of	US 1990-602867	19901024
			US 1991-743502	19910809
EP 554283	A1		EP 1991-917854	19911024
			WO 1991-CA377	19911024
EP 554283	B1		EP 1991-917854	19911024
			WO 1991-CA377	19911024
CA 2093223	C		CA 1991-2093223	19911024

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9187212	A	Based on	WO 9207476
EP 554283	A1	Based on	WO 9207476
EP 554283	B1	Based on	WO 9207476

PRIORITY APPLN. INFO: US 1991-743502 19910809; US 1990-602867 19901024

AB WO 9207476 A UPAB: 19951026
Prodn. of pigments with the colour of cooked cured meat is effected by (a) reacting bovine or porcine red blood cells with a nitrosating agent and a reducing agent at elevated temp., (b) treating the prod. with a stabiliser comprising a polysaccharide (I), a binder (II) and a reducing agent (III) and/or a sequestrant (IV); and (c) spray-, drum- or freeze-drying the prod.

(I) is selected from starch, modified starches, starch polymers, starch derivs., starch prods., 'N-LOK', maltodextrins and Schardinger dextrins, e.g. beta-cyclodextrin. (II) is a gum and/or glycerol.

USE/ADVANTAGE - The pigments produce the characteristic pink colour of nitrite-cured meat when added to meat or fish prods., e.g. minced pork,

before cooking
0/9
Dwg.0/9

L7 ANSWER 2 OF 5 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 1980-22783C [13] WPIDS
TITLE: Excipient for powdering liq. or pasty foods - comprises a
mixt. of cyclodextrin and dextrin of specified dextrose equiv..
DERWENT CLASS: A11 A97 D13
PATENT ASSIGNEE(S): (NISH-N) NIPPON SHOKUHIN KAK
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 55021725	A	19800216	(198013)*		
JP 56044695	B	19811021	(198146)		

PRIORITY APPLN. INFO: JP 1978-93652 19780802
AB JP 55021725 A UPAB: 19930902
An excipient (I) is composed of **cyclodextrin** (II) and dextrin (III) of dextrose equiv. 5-40. The dextrose equiv. of (I) is <25. Liq. or pasty foods, are powdered by (i) mixing the food with a mixt. of (II) and (III) in a ratio such that dextrose equiv. of the mixt. is <25, and (ii) drying the mixt.

The content of (II) in (I) is pref. 10-50 wt.%. The mixt. of liq. or pasty food and (I) is pref. dried by drum-layer. The present method is applied to drying of soy sauce, soups of fish, meat and chicken, fruits etc.

A liq. or pasty food can be dehydrated to powder without evaporation-loss or loss of flavour. The mixt. can be easily dried at high temp. by **drum-dryer**, spray dryer, etc.

L7 ANSWER 3 OF 5 USPATFULL
ACCESSION NUMBER: 2000:161142 USPATFULL
TITLE: Process for making a cyclodextrin
INVENTOR(S): Shah, Bharat K., East Lyme, CT, United States
Sklavounos, Constantine, Waterford, CT, United States
PATENT ASSIGNEE(S): Pfizer Inc., New York, NY, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6153746		20001128	
APPLICATION INFO.:	US 1998-106983		19980629	(9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-51497P	19970701 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Lee, Howard C.
LEGAL REPRESENTATIVE: Richardson, Peter C., Benson, Gregg C., Jones, James T.
NUMBER OF CLAIMS: 17

EXEMPLARY CLAIM: 1
LINE COUNT: 546
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Sulfoalkyl ether cyclodextrins are produced by a process of treating an unsubstituted cyclodextrin starting material with an alkyl sultone in the presence of a base. The base is added in a stepwise, pH controlled manner so that substantially the entire initial charge of cyclodextrin starting material is at least partially reacted. Additional base is then added to complete the reaction, and residual alkyl suftone is destroyed. The product advantageously contains low levels of both residual cyclodextrin and residual alkyl sultone.

L7 ANSWER 4 OF 5 USPATFULL
ACCESSION NUMBER: 93:60924 USPATFULL
TITLE: Process for preparing a powdered cooked cured-meat pigment
INVENTOR(S): Shahidi, Fereidoon, Department of Biochemistry, Memorial University, St. John's, Canada
Pegg, Ronald B., Department of Biochemistry, Memorial University, St. John's, Canada A1B 3X9

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5230915		19930727
APPLICATION INFO.:	US 1991-743502		19910809 (7)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1990-602867, filed on 8 Oct 1990, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Corbin, Arthur L.
LEGAL REPRESENTATIVE: Birch, Stewart, Kolasch & Birch
NUMBER OF CLAIMS: 17
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 10 Drawing Figure(s); 9 Drawing Page(s)
LINE COUNT: 2688
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The pigment responsible for the color of cooked cured-meats has been prepared from red blood cells, directly or indirectly through a hemin intermediate. The process for preparing this pigment includes reacting bovine or hog red blood cells with a nitrosating agent and a reductant, at elevated temperatures, to provide a cooked cured-meat pigment; stabilizing and/or encapsulating and/or protecting the cooked cured-meat pigment to provide a stabilized cooked cured-meat pigment; and drying the stabilized cooked cured-meat pigment by spray-drying, drum-drying or freeze-drying techniques. As an essential feature of this invention, the pigment is encapsulated in carbohydrate-based wall materials for easy handling. The stabilized pigment, when added to meat prior to cooking, reproduces the typical color of a nitrite-cured meat product.

L7 ANSWER 5 OF 5 USPATFULL
ACCESSION NUMBER: 91:42703 USPATFULL
TITLE: Pharmaceutical composition
INVENTOR(S): Hunter, Christopher, Leeds, United Kingdom
Yau, David, Hull, United Kingdom
PATENT ASSIGNEE(S): Reckitt & Colman Products Limited, London, England

(non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5019563		19910528	
APPLICATION INFO.:	US 1989-356691		19890525	(7)

	NUMBER	DATE
PRIORITY INFORMATION:	GB 1988-13682	19880609

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Griffin, Ronald W.
ASSISTANT EXAMINER: Webber, Pamela S.
LEGAL REPRESENTATIVE: Bacon & Thomas
NUMBER OF CLAIMS: 7
EXEMPLARY CLAIM: 1
LINE COUNT: 443
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Complexes of .beta.-cyclodextrin with various salts of ibuprofen are described in which the molar ratios of ibuprofen to .beta.-cyclodextrin are within the range of from 1:0.20 to 1:0.75. The preferred salt of ibuprofen is the sodium salt. The complexes have enhanced taste profile and bioavailability. Also disclosed are methods for preparing the complexes and also pharmaceutical compositions thereof.

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=> d his

     (FILE 'HOME' ENTERED AT 15:24:39 ON 25 JUN 2002)

     FILE 'CAPLUS, WPIDS, USPATFULL' ENTERED AT 15:25:08 ON 25 JUN 2002
L1            0 S DRIED(W)AGGLOMERATED(2W)CYCLODEXTRIN
L2           75 S DRIED(L)AGGLOMERATED(L)CYCLODEXTRIN
L3           68 L2 AND (PARTICLE SIZE)
L4           68 DUP REM L3 (0 DUPLICATES REMOVED)
L5            0 S (MODIFIED CYCLODEXTRIN)(P)(DOUBLE DRUM DRYER)
L6            0 S (MODIFIED CYCLODEXTRIN)(P)(DRUM DRY?)
L7            5 S CYCLODEXTRIN(P)(DRUM DRY?)

=> s cyclodextrin/ti and cyclodextrin and (drum dry?)
L8            3 CYCLODEXTRIN/TI AND CYCLODEXTRIN AND (DRUM DRY?)

=> d l8 1-8 ibib ab

L8   ANSWER 1 OF 3  WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER:     1980-22783C [13]   WPIDS
TITLE:                Excipient for powdering liq. or pasty foods - comprises
a
                      mixt. of cyclodextrin and dextrin of specified
                      dextrose equiv..
DERWENT CLASS:        A11 A97 D13
PATENT ASSIGNEE(S):   (NISH-N) NIPPON SHOKUHIN KAK
COUNTRY COUNT:        1
PATENT INFORMATION:

     PATENT NO   KIND DATE     WEEK      LA   PG
     -------------------------------------------
     JP 55021725   A  19800216 (198013)*
     JP 56044695   B  19811021 (198146)
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PRIORITY APPLN. INFO: JP 1978-93652 19780802
AB JP 55021725 A UPAB: 19930902
An excipient (I) is composed of **cyclodextrin** (II) and dextrin (III) of dextrose equiv. 5-40. The dextrose equiv. of (I) is <25. Liq. or pasty foods, are powdered by (i) mixing the food with a mixt. of (II) and (III) in a ratio such that dextrose equiv. of the mixt. is <25, and (ii) drying the mixt.

The content of (II) in (I) is pref. 10-50 wt.%. The mixt. of liq. or pasty food and (I) is pref. dried by drum-layer. The present method is applied to drying of soy sauce, soups of fish, meat and chicken, fruits etc.

A liq. or pasty food can be dehydrated to powder without evaporation-loss or loss of flavour. The mixt. can be easily dried at high temp. by **drum-dryer**, spray dryer, etc.

L8 ANSWER 2 OF 3 USPATFULL
ACCESSION NUMBER: 2000:161142 USPATFULL
TITLE: Process for making a **cyclodextrin**
INVENTOR(S): Shah, Bharat K., East Lyme, CT, United States
Sklavounos, Constantine, Waterford, CT, United States
PATENT ASSIGNEE(S): Pfizer Inc., New York, NY, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6153746		20001128	
APPLICATION INFO.:	US 1998-106983		19980629	(9)

	NUMBER	DATE	
PRIORITY INFORMATION:	US 1997-51497P	19970701	(60)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Lee, Howard C.
LEGAL REPRESENTATIVE: Richardson, Peter C., Benson, Gregg C., Jones, James T.
NUMBER OF CLAIMS: 17
EXEMPLARY CLAIM: 1
LINE COUNT: 546
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Sulfoalkyl ether **cyclodextrins** are produced by a process of treating an unsubstituted **cyclodextrin** starting material with an alkyl sultone in the presence of a base. The base is added in a stepwise, pH controlled manner so that substantially the entire initial charge of **cyclodextrin** starting material is at least partially reacted. Additional base is then added to complete the reaction, and residual alkyl suftone is destroyed. The product advantageously contains low levels of both residual **cyclodextrin** and residual alkyl sultone.

L8 ANSWER 3 OF 3 USPATFULL
ACCESSION NUMBER: 97:31594 USPATFULL
TITLE: Haze-free **cyclodextrins**
INVENTOR(S): Shieh, Wen, Crown Point, IN, United States
Hedges, Allan, Crown Point, IN, United States

PATENT ASSIGNEE(S): American Maize-Products Company, Hammond, IN, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5620872		19970415
APPLICATION INFO.:	US 1995-479866		19950607 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1991-792022, filed on 13 Nov 1991, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Wityshyn, Michael G.
ASSISTANT EXAMINER: Prats, Francisco C.
LEGAL REPRESENTATIVE: Lucas & Just
NUMBER OF CLAIMS: 19
EXEMPLARY CLAIM: 1
LINE COUNT: 396
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A **cyclodextrin** which when added to water produces a haze-free solution is made by the use of starch which contains at least about 90% amylopectin in a two-stage process wherein first a starch hydrolysate is formed by means of an alpha-amylase or an acid and a second subsequent step wherein the **cyclodextrin** is formed by means of a **cyclodextrin**-glycosyl-transferase.

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     (FILE 'HOME' ENTERED AT 15:24:39 ON 25 JUN 2002)

     FILE 'CAPLUS, WPIDS, USPATFULL' ENTERED AT 15:25:08 ON 25 JUN 2002
L1             0 S DRIED(W)AGGLOMERATED(2W)CYCLODEXTRIN
L2            75 S DRIED(L)AGGLOMERATED(L)CYCLODEXTRIN
L3            68 L2 AND (PARTICLE SIZE)
L4            68 DUP REM L3 (0 DUPLICATES REMOVED)
L5             0 S (MODIFIED CYCLODEXTRIN)(P)(DOUBLE DRUM DRYER)
L6             0 S (MODIFIED CYCLODEXTRIN)(P)(DRUM DRY?)
L7             5 S CYCLODEXTRIN(P)(DRUM DRY?)
L8             3 S CYCLODEXTRIN/TI AND CYCLODEXTRIN AND (DRUM DRY?)

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US006153746A

United States Patent [19]

Shah et al.

[11] **Patent Number: 6,153,746**

[45] **Date of Patent: Nov. 28, 2000**

[54] **PROCESS FOR MAKING A CYCLODEXTRIN**

[75] Inventors: **Bharat K. Shah**, East Lyme; **Constantine Sklavounos**, Waterford, both of Conn.

[73] Assignee: **Pfizer Inc.**, New York, N.Y.

[21] Appl. No.: **09/106,983**

[22] Filed: **Jun. 29, 1998**

Related U.S. Application Data

[60] Provisional application No. 60/051,497, Jul. 1, 1997.

[51] **Int. Cl.**[7] **C07H 1/00**

[52] **U.S. Cl.** **536/103**; 514/58

[58] **Field of Search** 514/58; 536/103

[56] **References Cited**

U.S. PATENT DOCUMENTS

3,426,011	2/1969	Parmerter et al. .	
5,134,127	7/1992	Stella et al.	514/58
5,376,645	12/1994	Stella et al.	514/58

FOREIGN PATENT DOCUMENTS

9111172	8/1991	WIPO	A61K 9/00
9402518	2/1994	WIPO	C08B 37/16

OTHER PUBLICATIONS

Rajewski et al. "Preliminary Safety Evaluation of Parenterally Administered Sulfoalkyl Ether β–Cyclodextrins Derivatives", *J. Pharm. Sci*, vol. 84(8):927–932.

Primary Examiner—Howard C. Lee

Attorney, Agent, or Firm—Peter C. Richardson; Gregg C. Benson; James T. Jones

[57] **ABSTRACT**

Sulfoalkyl ether cyclodextrins are produced by a process of treating an unsubstituted cyclodextrin starting material with an alkyl sultone in the presence of a base. The base is added in a stepwise, pH controlled manner so that substantially the entire initial charge of cyclodextrin starting material is at least partially reacted. Additional base is then added to complete the reaction, and residual alkyl suftone is destroyed. The product advantageously contains low levels of both residual cyclodextrin and residual alkyl sultone.

17 Claims, No Drawings

PROCESS FOR MAKING A CYCLODEXTRIN

The priority date of U.S. provisional application Ser. No. 60/051,497 filed Jul. 1, 1997 is claimed.

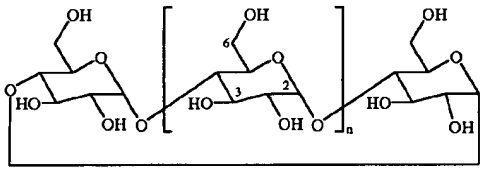
FIELD OF THE INVENTION

This invention relates to a process for making sulfoalkyl ether cyclodextrins and also to the cyclodextrins themselves.

BACKGROUND OF THE INVENTION

Cydodextrins, sometimes referred to as Schardinger's dextrins, were first isolated by Villiers in 1891 as a digest of *Bacillus amylobacter* on potato starch. The foundations of cydodextrin chemistry were laid down by Schardinger in the period 1903–1911. Until 1970, however, only small amounts of cyclodextrins could be produced in the laboratory and the high production cost prevented the usage of cyclodextrins in industry. In recent years, dramatic improvements in cyclodextrin production and purification have been achieved and cyclodextrins have become much less expensive, thereby making the industrial application of cyclodextrins possible.

Cyclodextrins are cyclic oligosaccharides with hydroxyl groups on the outer surface and a void cavity in the center. Their outer surface is hydrophilic, and therefore they are usually soluble in water, but the cavity has a lipophilic character. The most common cyclodextrins are α-cyclodextrin, β-cyclodextrin and γ-cyclodextrin, consisting of 6, 7 and 8 α-1,4-linked glucopyranose units, respectively. Thus cyclodextrins have the general formula:



wherein n is 4, 5, or 6. The number of these units determines the size of the cavity. In the case of α-cyclodextrins, n is 4. For β- and γ-cyclodextrins, n is 5 and 6, respectively.

Cyclodextrins are capable of forming inclusion complexes with a wide variety of hydrophobic molecules by taking up a whole molecule (a "guest molecule"), or some part of it, into the void cavity. Common cyclodextrin derivatives are formed by alkylation (e.g., methyl-and-ethyl-β-cyclodextrin) or hydroxyalkylation of α-, β-, and γ-cyclodextrin or by substituting the primary hydroxyl groups with saccharides (e.g., glucosyl- and maltosyl-β-cydodextrin). Hydroxypropyl-β-cyclodextrin and its preparation by propylene oxide addition to β-cyclodextrin, and hydroxyethyl-β-cyclodextrin and its preparation by ethylene oxide addition to cyclodextrin, were described in a patent of Gramera et al. (U.S. Pat. No. 3,459,731, issued August 1969).

Although cyclodextrins have been used to increase the solubility, dissolution rate and/or stability of a great many compounds, it is also known that there are many drugs for which cyclodextrin complexation either is not possible or yields no advantages. See J. Szejtli, Cyclodextrins in Drug Formulations: Part II, Pharmaceutical Technology, 24–38, August, 1991.

U.S. Pat. No. 5,134,127 to Stella et al., herein incorporated by reference, discloses cyclodextrin derivatives wherein the glucopyranose units are substituted by (C_{2-6}alkylene)-SO_3 groups, herein referred to as sulfoalkyl ether cyclodextrins. The degree of substitution, calculated as the average number of sulfoalkyl ether groups per cyclodextrin ring, range from 1.2 to about 7. These cyclodextrins are advantageous, inter alia, because they possess a very low level of toxicity and a high aqueous solubility. They are suitable for use as clathrating agents with drugs to provide complexes which are useful in parenteral and other pharmaceutical formulations.

Sulfoalkyl ether cyclodextrins as disclosed in U.S. Pat. No. 5,134,127 are made by treating an unsubstituted (α-, β-, or γ-) cyclodextrin starting material with an alkyl sultone in the presence of a base. Residual cyclodextrin is undesirable since it is a known nephrotoxin. Residual alkyl sultone, an alkylating agent, is also toxic and it is accordingly desirable that residual alkyl sufltone levels be as low as possible, preferably essentially absent, in the crude and/or finished sulfoalkyl ether cyclodextrin product. A method which provided for low levels of both, and which otherwise allowed achieving low levels of other by- products, would be a useful addition to the cyclodextrin art.

DESCRIPTION OF THE INVENTION

Percentages as used herein, unless otherwise identified, mean "% by weight", w/w (weight by weight concentration) unless otherwise indicated.

This invention provides sulfoalkyl ether cyclodextrins containing less than 25 ppm of alkylsuftone and, simultaneously, less than 0.5% by weight of residual (i.e., unreacted) cydodextrin.

The present invention further provides an improved aqueous process for making sulfoalkyl ether cyclodextrins.

This invention provides a process of making a sulfoalkyl ether cyclodextrin having a predetermined degree of substitution (i.e., of sulfoalkyl ether groups), comprising the steps of

- combining in an aqueous reaction medium an (unsubstituted) cyclodextrin starting material and an alkyl sultone in an amount sufficient to effect said pre-determined degree of substitution, in the presence of a base to effect sulfoalkylation of said cyclodextrin;
- maintaining the pH of the reaction medium basic but at a level less than about 11 during said sulfoalkylation for a time sufficient to consume said cyclodextrin such that residual unreacted cyclodextrin reaches a level of less than 0.5% by weight (based on the original weight of unsubstituted cyclodextrin starting material), preferably less than 0.1%, and;
- adding base in an amount sufficient to effect completion of said sulfoalkylation, i.e., to said pre-determined degree of substitution.

A preferred additional step following said completion comprises adding additional base (hydroxide) in an amount and under conditions sufficient to effect destruction of residual alkylsultone, thereby providing a crude product having low residual alkylsultone, less than 25 ppm.

In a preferred embodiment, this invention provides a process of making a sulfoalkyl ether cyclodextrin having a pre-determined degree of substitution, comprising the steps of:

A) combining an unsubstituted cydodextrin starting material with an alkyl sultone in an amount sufficient to effect said pre-determined degree of substitution, in the presence of an alkali metal hydroxide;

B) conducting sulfoalkylation of said cyclodextrin within a pH range of about 8 to about 11 until residual

unreacted cyclodextrin is less than 0.5% by weight, preferably less than 0.1%;

C) adding additional hydroxide in an amount sufficient to achieve said degree of substitution and allowing said sulfoalkylation to proceed to completion; and

D) adding additional hydroxide to destroy residual sultone. This step is advantageously conducted using a quantity of hydroxide, and under conditions (i.e., amount of additional hydroxide added, temperature, length of time during which the sultone hydrolysis is conducted) such that the level of residual sultone in the aqueous crude product is reduced to less than 20 ppm.

After the reaction has been conducted as described above, the sulfoalkyl ether cyclodextrin aqueous medium is neutralized to a pH of about 7 to quench the reaction. The product can then be diluted with water to lower viscosity, particularly if further purification is to be conducted. Further purification steps are advantageously employed, including the use of diafiltration on an ultrafiltration unit to purge the reaction of by-products such as salts (e.g., NaCl if sodium hydroxide was employed as the base) and other low molecular weight by-products. The product can further be concentrated by ultrafiltration. The product solution can then be carbon treated to improve color and to reduce bioburden. The product can be isolated by a suitable drying technique such as freeze drying, spray drying, or vacuum drum drying.

The reaction can be initially prepared by dissolving an (unsubstituted) α-, β-, or γ-cyclodextrin starting material in an aqueous solution of base, usually a hydroxide such as lithium, sodium, or potassium hydroxide. The base is present in an amount which is stoichiometrically insufficient, relative to the amount of cyclodextrin, to achieve a predetermined or desired degree of substitution. That is, the base is present in an amount less than one molar equivalent for each hydroxyl sought to be derivatized in the cyclodextrin molecule. Because cyclodextrins become increasingly soluble in aqueous solution as the temperature is raised, the aqueous reaction mixture containing base and cyclodextrin should be raised to a temperature of about 50° C. to ensure complete dissolution. Advantageously, agitation is employed throughout the course of the sulfoalkylation reaction.

After dissolution is complete the alkylsultone is added to start the sulfoalkylation reaction. The total amount of alkylsultone added throughout the reaction will generally be in excess of the stoichiometric amount required to complete the reaction relative to the amount of cyclodextrin since some of the alkylsultone is hydrolyzed and/or otherwise destroyed such that it is not available for use in the sulfoalkylation reaction. The exact amount of alkylsultone to use for a desired degree of substitution can be determined through the use of trial runs. The entire amount of alkyl sultone needed to complete the reaction is generally added prior to initiating the reaction. Because the system is aqueous, the reaction is generally conducted at a temperature between 50° C. and 100° C. The reaction preferably should be conducted at a temperature less than 100° C. so that specialized pressure equipment is not required. In general, a temperature of 65° C. to 95° C. is preferred.

During the initial phase of the reaction (herein referred to as the pH-control phase), care should be taken to monitor the pH and maintain it basic, preferably within the range of about 8 to about 11. Monitoring of pH can be effected conventionally as by using a standard pH meter. Adjustment of the pH can be effected by adding an aqueous solution of hydroxide, typically as a 10–15% solution. It is during this initial pH-control phase that residual unreacted cyclodextrin is reacted to the extent that less than 0.5% by weight, preferably less than 0.1% by weight, of unreacted cyclodextrin is left. Substantially the entire initial charge of cyclodextrin is thus reacted by being partially substituted, but to less than the desired pre-determined degree of substitution. Residual cyclodextrin can be monitored throughout this initial phase, for example by HPLC as described below, until a desired endpoint of less than 0.5%, preferably less than 0.1%, of residual cyclodextrin starting material, has been achieved. The pH can be maintained and/or raised by adding concentrated hydroxide to the reaction medium continuously or in discrete steps as small increments. Addition in small increments is preferred.

Once a sulfoalkylation procedure has been standardized or optimized so that it is known that particular amounts of reactants can be combined in a procedure which produces the desired degree of substitution in conjunction with low residual cyclodextrin, then the procedure can simply be checked at the end, as opposed to throughout or during the initial pH-control step, to ensure that a low level of residual (unreacted) cydodextrin starting material has been achieved.

It is noted that the initial pH of the reaction medium may be above 11, for example after combining the initial charge of cyclodextrin starting material and base, but prior to addition of alkyl sultone. Once alkyl sultone has been added and the reaction commences, however, the pH quickly drops, necessitating addition of base to maintain the pH basic in the 8–11 range.

Once the level of residual unreacted cyclodextrin has reached a desired level below 0.5% by weight during the pH control stage, the pH can be raised to above 11, for example a level above 12, by adding additional base to drive the reaction to completion. The pH is preferably at least 12 so that the reaction proceeds at a reasonable rate, but not so high that unreacted alkyl sultone is hydrolyzed rapidly rather than reacting with cyclodextrin. During this latter phase of the reaction, additional substitution of the cyclodextrin molecule is effected until the pre-determined degree of substitution has been attained. The total amount of hydroxide added throughout the reaction is typically on the order of the amount stoichiometrically required plus a 10–20% molar excess relative to the amount of alkyl sultone employed. The addition of more than a 10–20% excess is also feasible. The reaction end point, as noted above, can be detected by HPLC. Again, the preferred temperature range is 65° C. to 95° C. The HPLC system typically employs a C18 column used in reverse phase with pulsed amperometric detection (PAD). Elution can be by gradient using a two solvent system, Solvent A being 25 mM (millimolar) aqueous sodium hydroxide, Solvent B being 100 mM sodium nitrate in Solvent A.

Once the sulfoalkylation reaction is complete and the low residual cyclodextrin end point has been reached, additional hydroxide can be added to destroy residual sultone. The additional hydroxide is typically added in an amount of 0.5 to 3 molar equivalents relative to cyclodextrin and the reaction medium is allowed to continue heating within the range of 65° C. to 95° C., typically for 6 to 15 hours. After residual sultone destruction, the resulting crude product can be additionally treated to produce a final product by being diluted, diafiltered to reduce or rid the product of low molecular weight components such as salts, concentrated, carbon treated, and dried, usually to a level of less than 10% by weight of water based on the dried product.

The invention provides advantages in that the pH is initially monitored to ensure that it remains typically within the range of about 8 to about 11 as the sulfoalkyl ether

derivatization reaction proceeds. In this initial stage addition of hydroxide to facilitate the sulfoalkylation is staged or stepwise. By monitoring pH within the range of about 8 to about 11, the course of the reaction can be controlled and monitored such that the entire initial stock of (unsubstituted) cyclodextrin starting material is essentially reacted to the extent of effecting, on average, at least one sulfoalkyl substitution per cyclodextrin molecule. The entire cyclodextrin reactant is thus consumed at the beginning of the process, so that the level of residual (unreacted) cyclodextrin in the crude product is low, relative to the crude product produced by a process which features initially combining the entire stoichiometric or excess amount of base with cyclodextrin and alkyl sultone and allowing the reaction to proceed uncontrolled. Once the entire charge of cyclodextrin starting material has been initially partially reacted, the remaining hydroxide can be added to drive the reaction to completion by finishing the sulfoalkyl substitution to the pre-determined, desired degree. After the initial charge of cyclodextrin has been consumed in the first pH-controlled phase, the rate of hydroxide addition is not believed to be critical, although it is preferred that the pH of the reaction be maintained above about 12 so that the rate of reaction is commercially useful. The hydroxide can be added (e.g., as a solution) continuously or in discrete stages.

Another advantage of initial pH control is the reduction of certain by-products. It is noted that acid is produced as a result of the sulfoalkylation and that the pH tends to decrease as the reaction proceeds. On one hand, the reaction must be maintained basic since if the reaction medium is allowed to become too acidic the reaction will stop. Accordingly, it is preferred to maintain the pH of the reaction medium at a level of at least 8 by adding aqueous hydroxide as needed. On the other hand, if the pH is allowed to exceed a certain level, somewhere about the level of 11, then the reaction starts to produce a high level of the by-products 4-hydroxyalkylsulfonate and bis-sulfoalkyl ether, thus consuming alkylsultone. By initially monitoring pH and maintaining it within the range of 8 to 11, as opposed to simply providing the full charge of hydroxide at the start of the reaction, the reaction proceeds while producing a relatively low level of by-products and a relatively clean reaction mixture containing relatively low levels of the aforementioned by-products. At this point, residual (unreacted) alkylsultone levels can still be high, however.

Reference above to a reactant being provided in an amount which is "stoichiometrically sufficient", or the like, is with respect to the amount of reactant needed to fully derivatize the cyclodextrin of interest to a desired degree of substitution.

The phrase "alkali metal hydroxide" as used herein generally means lithium hydroxide, sodium hydroxide, or potassium hydroxide. If it is desired to produce a product suitable for parenteral administration, sodium hydroxide is preferred. The degree of susbstitution can be controlled by using correspondingly lower or higher amounts of alkyl sultone depending upon whether a lower or higher degree of substitution is desired. Generally the range of susbstitution that can be achieved is an average of from 4.5 to 7.5, preferably 5.5 to 7.5, most preferably 6.0 to 7.1.

The crude product of the above-described process, i.e. the product obtained following residual alkylsultone destruction, contains a lower level of residual cyclodextrin than that produced by a process in which the base is initially added in a single charge, and is provided as a further feature of the invention. The crude product produced by the process of this invention typically contains less than 0.5% by weight residual cyclodextrin, preferably less than 0.1%. As explained below, the crude product is also advantageous in that it contains very low residual alkylsultone levels.

Typically the crude aqueous cyclodextrin product solution obtained following residual alkylsultone destruction is purified by ultrafiltration, a process well known to the art in which the crude product is contacted with a semipermeable ultrafiltration membrane that passes low molecular weight impurities through the membrane. The molecular weight of the impurities passed through the membrane depends on the molecular weight cutoff for the membrane. For the instant invention a membrane having a molecular weight cutoff of 1,000 is typically employed. The desired product which is in the retentate is typically further treated with carbon powder to remove colors and further reduce any remaining impurities. The crude aqueous cyclodextrin product solution (i.e., obtained after residual alkyl sultone destruction but before purification) is advantageous in that it contains less than 20 ppm residual alkyl sultone based on the weight of the solution, preferably less than 8 ppm, more preferably less than 4 ppm. It is most preferred that the crude solution contain essentially no residual alkyl sultone.

A final, commercial product can be isolated at this point by filtration to remove the carbon, followed by evaporation of the water by any conventional process such as simple distillation, spray dying, or, preferably, lyophilization. The final product produced by the instant invention also advantageously contain very low residual levels of alkyl sultone, less than 25 ppm based on the weight of the dry (i.e., containing less than 10% by weight water) final product, preferably less than 10 ppm, and more preferably less than 5 ppm. It is most preferred that the final product contain essentially no residual alkyl suftone. The final product containing less than 25 ppm of alkyl sultone is accordingly provided as an additional feature of the invention. The sultone is reduced following completion of the sulfoalkylation to the desired degree of substitution by an alkaline hydrolysis treatment as previously described, i.e., by adding extra hydroxide solution in an amount and under conditions sufficient to reduce the amount of unreacted sultone in the dry product to the desired level below 25 ppm, preferably less than 10 ppm, most preferably less than 5 ppm. This basic alkaline hydrolysis step is constituted by step (D) in the preferred embodiment.

Unsubstituted α-, β-, and γ-cyclodextrins can be used as starting materials for derivatizing into sulfoalkyl ether cydodextrins with this invention. The present invention is preferred for use with β-cyclodextrin.

(C_2–C_6alkyl)sultones can be used in the invention. A preferred alkyl sultone for use as a sulfoalkylating agent is 1,4-butane sultone.

The invention is further disclosed and illustrated by the following examples, which are not to be construed as limiting the scope of this invention.

EXAMPLE 1

This example illustrates the invention on a several hundred gram scale. Note "UF" means ultrafiltration.

1. Reaction Scale and Stoichiometry of Reagents:

	Wt(g)	Moles	Molar Ratio
β-cyclodextrin	400.0	0.3137	1
(contains 11% moisture)	356.0 dry		
NaOH	131.7	3.2939	10.5
1,4-Butane Sultone	341.3	2.5096	8.0
HCl	As needed		

-continued

1. Reaction Scale and Stoichiometry of Reagents:

	Wt(g)	Moles	Molar Ratio
Equipment:			
Reactor	3 L RB Flask		
UF Unit	15 sq. ft, 1000 nominal molecular weight cutoff (MWCO) Cellulose Membrane, spiral wound from Millipore, Inc.		

2. Procedure:

In a 3 lit reaction flask, 652.4 g of 12.5% (2.038 moles) of aqueous NaOH was charged followed by 400 g β-cyclodextrin (0.3137 moles). The mixture was heated to dissolve β-Cyclodextrin (β-CD) and brought to 70° C. with stirring. pH of the resulting solution was above 12. To this, 341.3 g (2.5096 moles) of 1,4-butane sultone was slowly added over 20–30 minute period. The alkylation reaction, as expected, was exothermic and the temperature rose to 90° C. and pH began to drop. An addition funnel containing 250.9 g of 12.5% (0.7841 moles) NaOH was set up and the reaction mixture was then allowed to stir at 70° C. for 1 hour and 44 minutes. During this time, the pH was maintained in the range of 9–10 with the slow addition of 22.9 g of 12.5% (0.716 moles) NaOH from the addition funnel. At the end of this time period, the remaining 228.0 g 12.5% (0.7125 moles) NaOH was added and the reaction was continued at 70° C. for about 6 hours, after which the β-CD concentration was confirmed to be less than 0.1% in the reaction mixture. An additional 75.2 g of 25% (0.470 moles) NaOH was added and the reaction was allowed to continue at 70° C. for about 17 hours to destroy the unreacted sultone to below 10 ppm in the reaction mixture. The crude reaction mixture was neutralized with concentrated HCl to pH of 7. The material was stored at below 5° C. until ultrafiltration (UF) processing.

The crude reaction mixture was diluted with water to 14 kg in a stainless steel pressure vessel and ultrafiltered on a Millipore 15 sq.ft unit to purge (in the permeate) the reaction by products such as NaCl, $HO(CH_2)_4SO_3Na$, bis-sulfobutyl ether and other low molecular weight species. The diafiltration was continued until the chloride concentration in the permeate dropped to less than 30 ppm as tested by $AgNO_3$ reagent. The product solution was further concentrated to 10 kg weight. The UF concentrate was treated with 28 g Darco KBB carbon and filtered through 1.0 μm (precoated with celite super cell) followed by 0.22 μm filters. The carbon treatment flask and filter cakes were rinsed with water and combined with the filtrate. The resulting solution weight was 11.8 kg

A 5.9 kg portion of this carbon treated material was evaporated on a Büchi apparatus to give 293 g of β-cyclodextrin sulfobutyl ether (β-CDSBE). The overall process yield was 82.5%. The average degree of substitution was 6.7 by the elemental analysis, 6.7 by Capillary Zone Electrophoresis and 6.2 by NMR. The material had less than 0.025% β-cyclodextrin and less than 10 ppm sultone. Actually neither of these two were detected, results being expressed at the lowest detection limit.

EXAMPLE 2

This example illustrates the invention on a several kilogram scale.

By a procedure similar to the one described in example 1, the reaction, cleanup and purification was carried out on 4 kg scale yielding 4.3 kg of β-CDSBE at 65% yield. The average degree of substitution was 6.5 by the elemental analysis, 6.6 by Capillary Zone Electrophoresis and 6.4 by NMR. The material had less than 0.025% β-cyclododextrin and less than 10 ppm sultone (again, neither was detected). In this example, low pyrogen (containing less than 0.25 endotoxins units/ml) water was used for all of the steps. The material was of parenteral grade quality.

EXAMPLE 3

This example illustrates the invention on a large scale.

By a procedure similar to the one described in example 1, alkylation of β-CD (93.3 kgs) using eight molar equivalents of 1,4-butane sultone (80 kgs) was carried out under basic pH conditions in a 100 gallon stainless steel reactor.

The solution (about 100 gallons) was filtered through an in-line 10 micron depth filter to remove residual particulate material, and the filtered solution added directly to about 700 gallons of depyrogenated water. Subsequent diafiltration (1,000 MWCO spiral wound membranes) using 1900 gallons of depyrogenated water was then used to purge low molecular weight reaction impurities and inorganic ions. The β-CD retentate (about 525 gallons) was confirmed as having less than 10 ppm residual chloride ion content.

Batch carbon treatment for 2 hours (with ~9% w/w Darco KBB) was then used to remove color bodies and reduce pyrogen content of the β-CDSBE stream. The carbon-treated stream was initially filtered through a Nutsche filter precoated with body-aid, followed by a 0.65 and 0.2 micron polishing filters. The β-CDSBE filtrate was subsequently concentrated to a volume of about 90–95 gallons via vacuum evaporation at 65–74° C.

The 30% w/w product solution was filtered through a 0.65 and 0.2 micron in-line filters. The solution was freeze-dried to produce 109.05 kgs of β-CDSBE at overall process yield of 68.2%. The average degree of substitution was 6.5 by Capillary Zone Electrophoresis method. The material was suitable for use in parenteral grade formulation.

EXAMPLE 4

By a procedure simijar to the one described in example 1, 150 g β-cyclodextrin was dissolved in 203 g 12% NaOH solution (5.2 molar equivalent) and alkylated with 79.8 g sultone (8 molar equivalent). The product was isolated as described above. The average degree of substitution was 4.9 by NMR and Capillary Zone Electrophoresis methods and the residual β-CD was 0.35% in β-CDSBE. The process yield was 53%.

EXAMPLE 5

Sulfobutyl ether β-cyclodextrin, produced by the method of Example #3 in U.S. Pat. No. 5,134,127, was analyzed for residual unreacted alkyl sultone content. The residual level of sultone in the crude reaction product was 1100 ppm, measured by capillary gas chromatography using a flexible quartz capillary column (25 mx).32 mm i.d. with 0.5 micron coating of 14% cyanopropylphenyl, 86% dimethyl siloxane, available as BP-10 from Scientific Glass Engineering Ltd, UK).

The crude product solution was treated by dialfiltration/ultrafiltration, then carbon treated and the water removed by rotary evaporation. The average degree of substitution was 7.0 by NMR and 7.1 by elemental analysis (c/s ratio). Residual sultone levels, measured by the same capillary GC method, were measured at 1800 ppm.

What is claimed is:

1. A process of making an aqueous sulfoalkyl ether cyclodextrin solution having a predetermnined degree of substitution, comprising the steps of

combining in an aqueous reaction medium an unsubstituted cyclodextrin starting material and an alkyl sultone in an amount sufficient to effect said pre-determnined degree of substitution, in the presence of a base to effect sulfoalkylation of said cyclodextrin;

maintaining the pH of the reaction medium basic but at a level less than about 11 during said sulfoalkylation for a time sufficient to consume said cyclodextrin such that residual unreacted cyclodextrin reaches a level of less than 0.5% by weight based on the original weight of unsubstituted cyclodextrin starting material;

adding base in an amount sufficient to effect completion of said sulfoalkylation; and

adding, additional base following said completion, said base being added in an amount and under conditions sufficient to effect destruction of residual alkylsultone to a level less than 20 ppm based on the weight of said solution.

2. A process as defined in claim 1, wherein said residual unreacted level of cyclodextrin is less than 0.1%.

3. A process as defined in claim 1, wherein said base is sodium hydroxide.

4. A process as defined in claim 1, wherein said cyclodextrin is β-cyclodextrin.

5. A process as defined in claim 1, wherein said alkyl sultone is 1,4-butane sultone.

6. A process as defined in claim 1, further comprising purifying the crude product obtained following residual alkylsultone destruction, said purification comprising the steps of diafiltration and carbon treatment.

7. A process of making an aqueous sulfoalkyl ether cyclodextrin solution having a pre-determined degree of substitution, comprising the steps of:

A) combining in an aqueous reaction medium an unsubstituted cyclodextrin starting material with an alkyl sultone in an amount sufficient to effect said predetermnined degree of substitution, in the presence of an alkali metal hydroxide;

B) conducting sulfoalkylation of said cyclodextrin within a pH range of about 8 to about 11 until residual unreacted cyclodextrin is less than 0.5% by weight, preferably less than 0.1%;

C) adding additional hydroxide in an amount sufficient to achieve said degree of substitution and allowing said sulfoalkylation to proceed to completion; and

D) adding additional hydroxide following said completion, said hydroxide being added in an amount and under conditions sufficient to effect destruction of residual alkylsultone to a level less than 20 ppm based on the weight of said solution.

8. A process as defined in claim 7, wherein said residual unreacted level of cyclodextrin is less than 0.1%.

9. A process as defined in claim 7, wherein said alkali metal hydroxide is sodium hydroxide.

10. A process as defined in claim 7, wherein said cyclodextrin is β-cyclodextrin.

11. A process as defined in claim 7, wherein said alkyl sultone is 1,4-butane sultone.

12. A process as defined in claim 7, further comprising purifying the product obtained following residual sultone destruction, said purification comprising the steps of diafiltration, carbon treatment, and carbon removal.

13. A process as defined in claim 12, further comprising the step of drying the product produced thereby.

14. A process as defined in claim 1, wherein said solution contains less than 8 ppm of residual alkylsultone.

15. A process as defined in claim 14, wherein said solution contains less than 4 ppm of residual alkylsultone.

16. A process as defined in claim 7, wherein said solution contains less than 8 ppm of residual alkylsultone.

17. A process as defined in claim 16, wherein said solution contains less than 8 ppm of residual alkylsultone.

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